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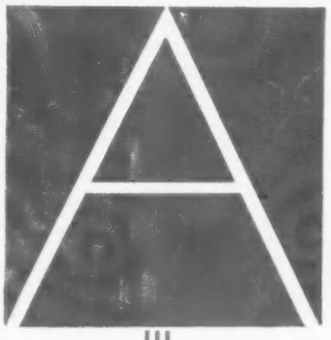
# THE OIL WEEKLY

## OIL & GAS ENGINEERING

News Statistics

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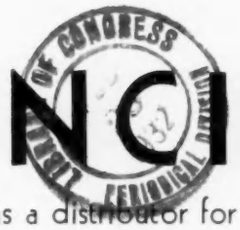

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BEAUMONT HOUSTON SHREVEPORT FORT WORTH OVERTON
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**February 19, 1932**

ADVERTISERS' INDEX, LAST PAGE EDITORIAL INDEX, PAGE 7

# 62

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HALLIBURTON
OIL WELL CEMENTING CO.
*Duncan, Oklahoma*


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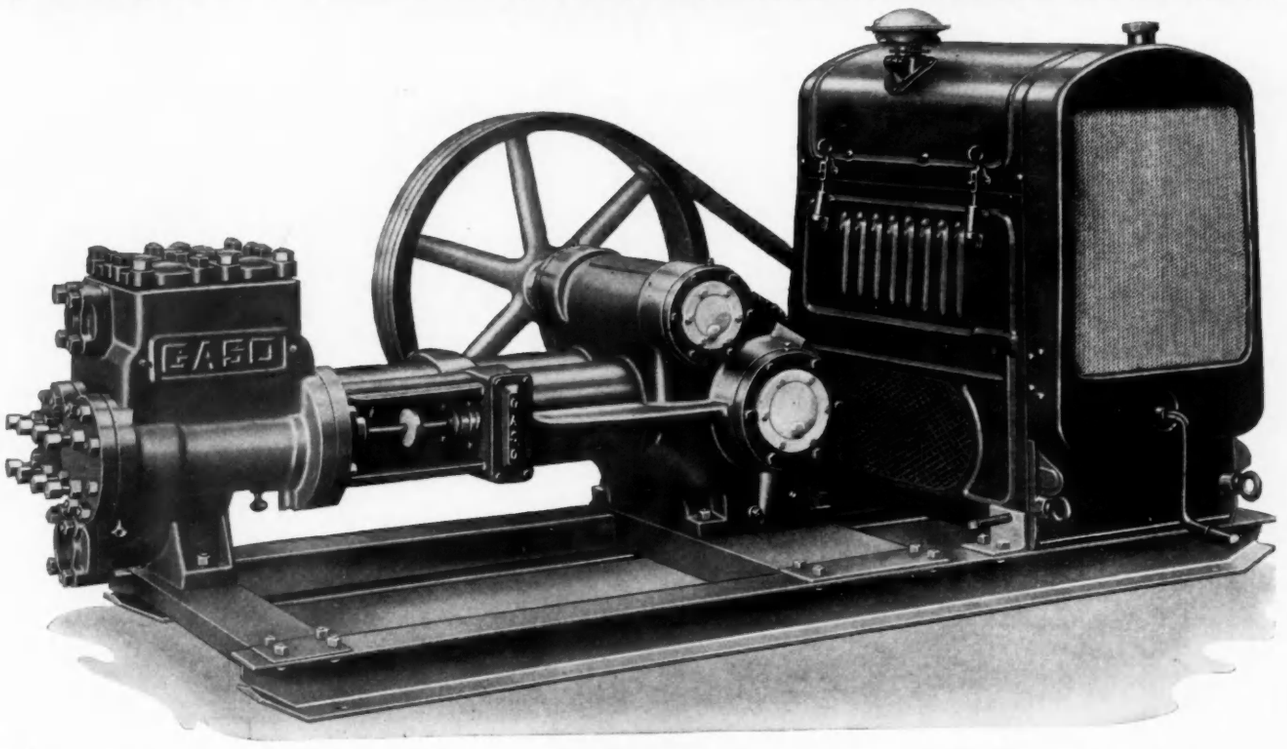
# A SMALL HIGH PRESSURE UNIT BY GASO

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In either soft or hard formation a full recovery is assured. Made in all sizes and any length.

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*Type "M" Cutter Head*

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## TOUGH!
## NEVER GET ENOUGH!

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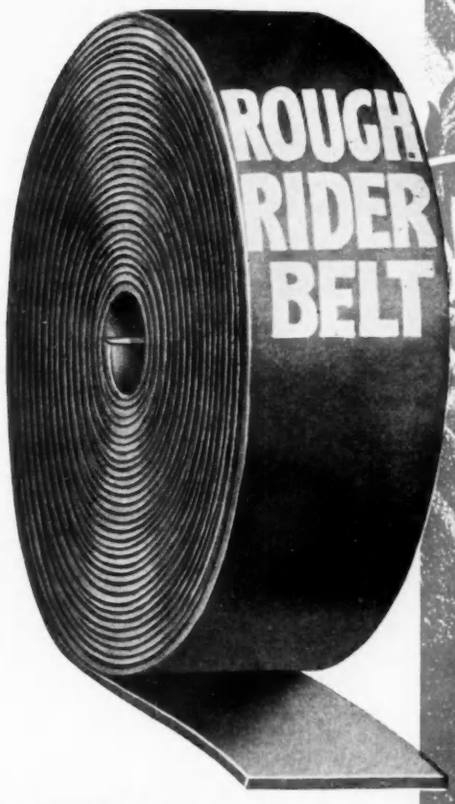

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# CONTINENTAL

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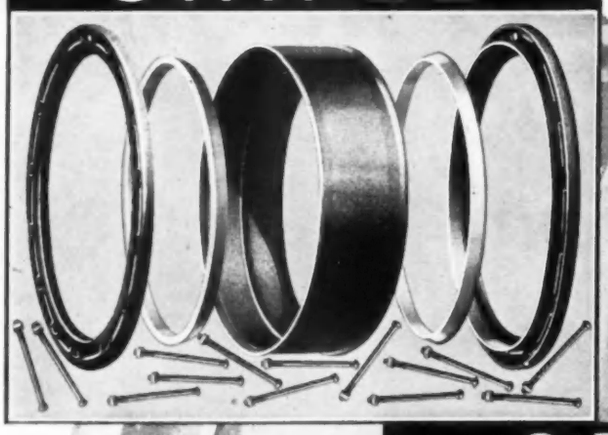

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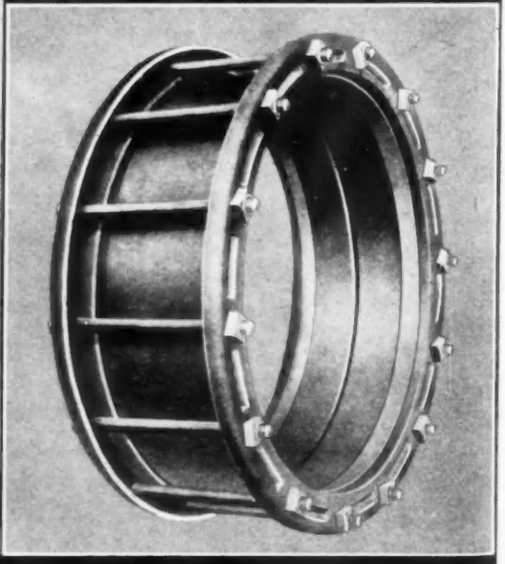

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32 Front Street, W., Toronto, Ontario

# DRESSER COUPLINGS *DOMINATE!*

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# THE OIL WEEKLY

February 19, 1932
Vol. 64, No. 10

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S. W. ROBINSON
*Editor*

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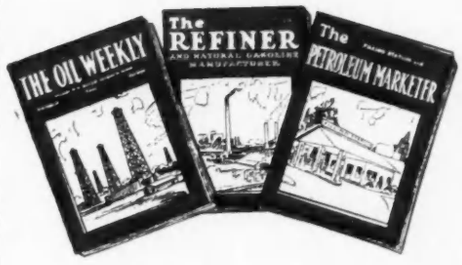


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R. L. DUDLEY, *President*
A. L. BURNS, *Gen'l Manager*
S. W. ROBINSON, *Editorial Director*
J. KENT RIDLEY, *Managing Editor*

NEW YORK: Room 324, 250 Park Avenue, Dick Swinsky, Manager.

PITTSBURGH: 703 Park Building, W. W. Pigue, Manager.

CHICAGO: Room 810, 624 Michigan Avenue, O. R. Waller, Manager.

LOS ANGELES: 416-417 Haas Building, W. E. Green, Manager.

TULSA: 913-916 Hunt Building, J. F. Carter, Jr., Manager.

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VOLUME 64, No. 10 FEBRUARY 19, 1932

# THE OIL WEEKLY

SPECIALIZED TO OIL AND GAS PRODUCTION
AND PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

# The Changing Panorama

What the federal court will say about East Texas curtailment under direction of the militia is still unrevealed as this is written. The decision, it is understood, has been made and announcement is expected momentarily. In the meantime the prospect is that conditions in the field will not change with the decision. The railroad commission has held its hearing which puts that body in position to promulgate rules for the field and the evidence presented will justify an order under which removal of the soldiers would be only a change of personnel. Engineers testifying at the hearing said that the system now in effect is in line with the best conservation practices for the area, and no opposition to the plan was aired. In contrast to other such events, the hearing at Austin was orderly, the testimony dealing with scientific phases of the question solely, and the engineers had convincing data which was interestingly presented. Page 11.

How pictures from the air could be of aid to the geologist and to the geophysicist is rather obscure to the lay mind—until one has examined a picture taken from the air. Even then what is revealed can not have a great deal of meaning to the untrained eye. But such pictures do show things that can not be seen by walking over the area, and the scientific gentlemen who busy themselves with locating probable oil bearing structures can see in them the outlines of faults, folds and other subsurface phenomena which are dear to their language. Even in the level country of the Gulf Coast where a surveyor's level is required to note differences in elevation, air pictures will outline the limits of a hidden salt dome. It is all mysterious, but the pictures show for themselves. Page 17.

## Bureau of Mines Report

The monthly report of the Bureau of Mines shows that stocks of all oils increased in December, 1931, but that at the end of the year these stocks were still 43,500,000 barrels less than at the end of the previous year. The adverse accumulation in December largely was because of imports of both crude and refined oils being increased while exports were sharply off. Net draught

***Largest of state capitols in America, located also in the largest of the 48 states, is this $6,000,000 granite edifice at Austin, Texas. There the railroad commission last week held an important hearing on the East Texas oil field.***

on crude stocks for the year appears to be 48,000,000 barrels, the difference between that figure and stocks of all oils being represented by oils that were processed and stored. Percentage of gasoline recovered from crude was lower in December than in November, and consumption of gasoline was 4.6 per cent up from December a year ago. Unsatisfactory gasoline stocks brought refinery gasoline prices down to an average of less than two cents in the Mid-Continent, and while crude prices remained unchanged during the month they average 19 per cent lower than December of 1930. Page 15.

## Gasoline Stocks Increase

Only East Texas and the Gulf Coast area come in with reduced crude oil output for the week. Total decline of these of 25,800 barrels daily more than offset small increases elsewhere to give output for the United States a daily average drop of 14,400 barrels. Output and market demand continue out of balance, especially in California, Oklahoma and Kansas. Diminishing demand leaves substantial amounts of crude oil moving into storage. On top of this gasoline stocks mounted again, with 2,000,000 barrels of this finished product added to storage for the week. This is the highest total increase for the year. The East Coast refining area is still the chief contributor to the growing gasoline stock total. Page 35.

### THE OIL MAN'S CALENDAR

MARCH

7-8 *Committee D-2, Cleveland, Ohio.*
7-11 *American Society for Testing Materials, Cleveland, Ohio.*
10 *California Oil & Gas Association, Los Angeles (Annual Banquet).*
14-18 *American Chemical Society, New Orleans, Louisiana.*
17-19 *American Association of Petroleum Geologists, Oklahoma City, Oklahoma.*
21-27 *Oil Equipment and Engineering Exposition, Los Angeles (Third Annual).*
28- 1 *American Chemical Society, New Orleans, Louisiana.*

APRIL

11-16 *American Oil Burner Association, Boston, Mass. (9th Annual).*
21-22 *National Petroleum Association, Cleveland, Ohio (Semi-Annual).*
22-24 *Petroleum Industry Electrical Association, Dallas, Texas (Baker Hotel).*
27-29 *National Pipe and Supplies Association, White Sulphur Springs, W. Va.*

MAY

4- 6 *National Foreign Trade Council, Honolulu, Hawaii.*
9-11—*Natural Gas Department, American Gas Association, Tulsa, Oklahoma.*
9-13 *National Fire Protection Association, Atlantic City, N. J.*
17-19 *Natural Gasoline Association of America, Tulsa, Oklahoma (Mayo Hotel).*

JUNE

1- 3 *American Petroleum Institute (Mid-Year Divisional Meetings), Tulsa, Oklahoma (Mayo Hotel).*
6- 9 *National Association of Purchasing Agents, Detroit, Michigan.*
20-24 *American Society for Testing Materials, Atlantic City, N. J.*

SEPTEMBER

14-16 *National Petroleum Association, Atlantic City, N. J. (Annual).*

NOVEMBER

15-17 *American Petroleum Institute, Houston, Texas (Annual).*

A "salt water" committee is worth many times its salt, even when there is no superabundance of salt water. This is shown in East Texas. When production engineers first conferred on this area they agreed that a great flood of salt water was imminent, and a committee was organized to regulate disposal. What with the soldiers and other factors, oil and the water that was to follow has been held in, but good work has been done by the committee in policing the area for stream pollution and fire hazards. Result is that not many fields have been drilled with as few damage claims as have developed in East Texas. Page 55.

The court at Austin hearing the suit of Attorney General Allred against the principal companies operating in Texas concerned itself most of the week hearing arguments of "friends of the court" that the out-state defendants are not properly party to the suit. The array of council appearing "on their own" should be sufficient to establish the court as an aristocrat in his profession. The point at issue is still to determine with the prospect that the argument will continue for a number of days. After that it is possible that the real issues will be investigated. Page 48.

## California Gloom

California, more so probably than any other section, is having trouble just at this time adjusting to conditions. Curtailment efforts have been extended to around half of rated potential, and still stocks are accumulating. Introduction of third-grade gasoline, the latest move, does not seem to improve the local market and heavy falling off of out-state shipments, both foreign and coast-wise, is being seriously felt. Drilling operations are routine and at the irreducible minimum. Octane requirements and the growth of cracking gives some hope for the future to operators owning settled production in heavy oil areas. Some concern is felt over the future supply of natural gas, and some drilling is under way seeking additional supplies. Page 52.

Guessing at what a congressional committee will do probably comes under the same heading with national polls on prohibition or guessing the weather in Texas. But from expressions they have made, it is apparent that the ways and means committee was impressed with the possibility of getting some revenue out of the oil industry during the recent hearing on the excise tax. Page 16.

A court decision upholds the authority of the Texas Railroad Commission to require closing in of gas wells until a use is provided for the gas. The particular case involved blowing residue gas from a gasoline plant into the atmosphere. Page 48.

# Engineers Urge Restricted Flow Continuance in East Texas

By JACK LOGAN
*Staff Representative*

AUSTIN, Texas.—Before the past week had ended it appeared that the stage was set for early resumption of control of the East Texas field by the Texas Railroad Commission, with likelihood that it would continue holding output around the volume to which the field has been restricted under the martial law regime of Governor R. S. Sterling.

For out of Tyler on Friday, February 12, came information that the three-judge federal court which heard testimony at Houston in January on the suit of E. Constantine and J. D. Wrather attacking martial law in East Texas, had reached a decision which would be announced in Houston within a few days. That the decision had been arrived at was revealed by Judge Randolph Bryant of the United States district court for Eastern Texas, one of the three members of the court which heard the case. A decision in favor of the plaintiffs and against the martial law program had been anticipated generally because of questions and expressions from the bench during the Houston hearing.

### Ready When Martial Law Lifts

On February 12 also there was held in Austin a hearing of East Texas operators before the railroad commission in anticipation of that body's being called upon to resume control of the large East Texas field in event of the lifting of martial law; and that Austin hearing, lasting only one day, indicated the existence of very little opposition to existing allowable production in East Texas, the meeting lacking the fireworks which were exhibited last spring and summer in similar commission hearings and drawing a much smaller crowd, only about 100 persons assembling in the senate chamber of the capitol for the occasion.

Outstanding testimony at the Austin hearing was that offered by E. V. Foran of Fort Worth, consulting engineer representing the Texas Oil and Gas Conservation Association, and substantiated by other witnesses, indicating that withdrawal of oil from the East Texas field at rates in excess of the current output would bring about rapid decline of the bottom hole pressures of wells and consequently result in material decrease of ultimate recovery of oil through trapping the fluid in the sand by coning and through relegating wells prematurely from the status of flowing producers to that of pumping properties by reason of wasteful dissipation of gas energy.

Even under the desirable conditions practiced in East Texas since last summer there has been a very noticeable decrease in bottom hole pressures, it was pointed out by Mr. Foran, and since the field was discovered it has suffered a decline of 190 to 200 pounds in mean bottom hole pressure. In producing approximately 116,000,000 barrels of oil from its discovery to February 1, 1932, the East Texas field as a whole had undergone a drop in mean bottom hole pressure from over 1600 pounds to about 1425 pounds, or nearly two pounds per million barrels of oil recovery, Foran declared, or over three times as great a decline per million barrels production as that sustained in 1931 in the strictly prorated Yates field of West Texas, which during that period produced 37,000,000 barrels of oil with pressure drop of 21 pounds, or about 6/10 of a pound per million barrels of production.

Practically the full testimony of Mr. Foran and most of the questions to which he responded subsequently upon being questioned by oil operators and attorneys, dealt with observed declines of pressure in the field in the past and the anticipated declines under given conditions in the future.

He commenced his testimony by presenting five varicolored maps representing physical reaction of the East Texas field with respect to changes in closed-in bottom hole pressures in the different sections of the productive area, as time has progressed, one map indicating pressure conditions in August, 1931, before the military shut-down of the field, and the others during September, October, November, and so on February 1, 1932, respectively. It was explained that the indicated pressure conditions were based upon records of pressures in approximately 150 wells of both major and small operators in all parts of the field; and on questioning by Myron Blalock of Marshall, attorney for an East Texas producing company, Foran stated that the readings were taken by representatives of Amerada Petroleum Corporation, Sun Oil Company, Humble Oil & Refining Company, and Gulf Production Company, operating instruments in wells of those companies and of other owners. Foran said he was present during making of the pressure tests in a few instances.

### High Pressure on West

The colored maps of the witness represented areas of different pressure by five different colors, with the five divisions roughly in the form of long, north-south trending belts paralleling each other, the belts of higher pressure being on the west side of the field, from which direction the water is driving into the field, and the belts farther east having progressively lower bottom hole pressures.

On the extreme west edge was a zone colored blue, representing pressures of 1525 to 1600 pounds in shut-in wells at the sub-sea depth of 3300 feet, with actual observed readings from all wells reduced to that common plane. Similarly, pressures in all other parts of the field were upon the same basis, although of different magnitude. The different belts, with colors and pressures represented, were as follows, the orange zone being on the extreme east edge of the field, and the blue on the west.

| Color | Pounds Pressure at 3300 ft. sub-sea |
|---|---|
| Orange | 1000 to 1150 |
| Red | 1150 to 1300 |
| Yellow | 1300 to 1450 |
| Green | 1450 to 1525 |
| Blue | 1525 to 1600 |

These symbols aided materially in visualizing the pres-

**TESTIMONY offered indicates that the field has already suffered a decline of approximately 200 pounds from the original bottom hole pressure of over 1600 pounds.**

sure changes attributed to the field. Viewed in their relation to each other, the outstanding point which they brought out was that there has been a steady and perhaps alarming shrinking of the extremely high pressure (blue) area in the field until now there is hardly any of that "blue" territory of 1525 to 1600 pounds pressures left, all that remains being included in two small, separate narrow belts on the extreme west edge of the field, one in the Gladewater area at the north end of the field and the other in the Joiner district in the southern extremity.

The dwindling of the high-pressure belt has been accompanied meanwhile by a steady advance of the lower pressure areas, it was shown, until a predominant part of the western half of the field is now occupied by the green symbol, representing pressures from 1450 to 1525 pounds, while the eastern half is predominanetly yellow, indicating pressures from 1300 to 1450 pounds, with a strip of considerable magnitude along the east edge of the Joiner district having even the lower pressures indicated by the red and orange symbols.

### Pressure Changes Mapped

In its beginning, it was explained, the whole field is regarded as having had the high pressures of the blue symbol. But even by the time represented by the August map, prior to the military shut-down, that high pressure area had been encroached upon by lower pressures until only about the western half of the field was still represented in blue; and at that time the green area was of considerable size, particularly in the Longview and Kilgore areas, where excessive withdrawals of oil had been made.

The map for September, reflecting the results of the 19-day military shut-down the latter part of August and in early September, and the restricted withdrawals subsequently under Governor Sterling's martial law program, put over the idea that although the extremely high pressure "blue" area had suffered further shrinkage, there was a steadying influence making the eastern limit of that "blue" zone uniform instead of erratic as under the former disorderly withdrawals. The September map likewise reflected an equalizing of pressures, the "green" zone of 1450 to 1525 pounds pressure spreading out not only a little into the former higher pressure "blue" territory, but also pushing back somewhat into former lower pressure "yellow" territory, the latter being increased in pressure to come within the "green" limits; while the "red" zone of 1150-1300 pound pressures and the "orange" of 1000-1150 pounds in the eastern Joiner district shrank from the important proportions occupied before the military shut-down to almost negligible areas in September.

During October the steadying influence of orderly withdrawal continued, and while the high pressure "blue" area underwent a further slight shrinkage in size, the building up of pressures in the eastern portion of the field continued; the "yellow" (1300-1450 pounds) area being contracted until it occupied only a strip in the eastern portions of the Joiner and southern Kilgore districts, although there was meanwhile some expansion of the "red" (1150-1300 pounds) territory. During October, therefore, there was in general a settling down of the field to a rather widespread, uniform pressure range of 1450 to 1525 pounds, the "green" territory spreading out both to the west and the east.

The map indicating pressure conditions in November indicated some further gradual dwindling of the field's original high pressure accompanying the steady, although orderly and restricted, drain upon the oil deposit; and in the meantime the "green" territory (pressures of 1450-1525 pounds) had commenced a westward movement, surrendering some of its ground on the east to the lower pressures of the "yellow" advance. It was noteworthy that there developed an entirely new low pressure area on the east side of the Longview district, the "yellow" area making its first appearance there contemporaneously with an increase of "yellow" territory in the Kilgore-Joiner district, although the "red" zone at the east edge of Joiner was contracted somewhat in the meantime.

The map indicating pressures on February 1, 1932, as stated previously, showed further noteworthy advances of the low pressure areas upon the field, the limits of the high pressure area (1525-1600 pounds) being pushed westward until the "blue" area had almost vanished, with the "green" (1450-1525 pounds of pressure) replacing it and spreading roughly over the western half of the field; while the "yellow" belt (1300-1450 pounds of pressure) had meanwhile expanded also to embrace much of the eastern half of the field, the still lower pressures of the "red" and "orange" likewise expanding to include increased area in the Joiner-Kilgore district.

Attention was called by Mr. Foran to the more uniform division lines between the areas of different pressure under restricted and orderly development of the field, and to the more ratable and orderly pressure declines under that regulated program.

It was through the pressure maps and discussions of the pressure conditions that the main argument of the hearing for closely restricted production was presented, those favoring orderly withdrawal at low daily rate basing practically all testimony on the contention that physical waste, which is by Texas law within the scope of control of the railroad commission, will result in East Texas if the reservoir pressure of the field is not adequately maintained; and that such pressure cannot be maintained except by withdrawal of oil at uniform and relatively small rates.

### Energy Waste Is Physical Waste

Any waste of energy is physical waste under express provisions of Texas statutes, it was pointed out by Mr. Foran, and since disproportionate withdrawals of oil from a field cause disorderly declines of pressures and result, therefore, in dissipation of useable energy, physical waste is brought about, and it is the duty of the railroad commission to prevent such waste in so far as it can.

Going further into the technical considerations involved, Foran pointed out that oil cannot be lifted from its underground source to the surface without energy in some form being expended, and that in the case of the East Texas oil field the energy exists within the reservoir in the form of gas and water drive. Of the two elements, he stated the water furnishes the higher proportion of lifting energy, the East Texas field having a notable deficiency of gas—in fact not enough to saturate the oil with which it is in contact. The extremely limited gas supply was advanced as a particular reason for careful and orderly production practices. Only by fullest utilization of the water drive, it was agreed, can there be maximum conservation of the gas energy; and in reaping the full benefit of the water pressure, there must be allowed sufficient time and proper conditions during process of producing the oil for the water to come in and displace

the oil as the latter is withdrawn, the water coming up from lower levels in the sand and from positions farther down dip in the sand, the downward dip in this field being on the west. Conversely, if the oil is withdrawn too rapidly, it was stated, the water does not come in fast enough and uniformly enough, considering the field as a whole, to maintain throughout the field the high and uniform water pressures which would be available under more orderly and less rapid withdrawals.

If subjected to excessive withdrawals, therefore, the field is forced to disproportionate expenditure of its gas energy instead of being allowed to profit by the latent water energy, it was contended, and the gas is wasted. The waste of gas, furthermore, brings about reduced pressures in the field, and the low pressures in themselves, in turn, contribute to further waste of gas.

For in order to prevent liberation of free gas in the pool it is necessary to maintain sufficient pressure to keep the gas in solution, and this calls for maintenance of pressures in excess of 900 to 1000 pounds, in the opinion of Mr. Foran.

The fact that free gas will make its appearance first in areas of low pressures was given as one of the outstanding advantages of avoiding if possible creation of the low pressure areas, and it was recognized by both sides in the Austin hearing that development of free gas in the pool will result in higher gas-oil ratios in producing wells and consequent waste of gas.

### Regulation of Pressure Decline

Questioned as to what can be done in East Texas toward avoiding or delaying creation of the low pressure areas which he had described as conducive to waste, Foran answered that two courses were possible: first, introduction of produced gas back into the oil sand, a procedure which would help, he said, especially on the east side of the field, since there is no water there; and second, regulation of water advance into the pool. The law does not require repressuring of the producing formation with gas which has been produced, Foran asserted, and the only remaining course which is open for the railroad commission in conserving the natural resources in the field is to require maximum utilization of the water drive of the field by restricted withdrawals which will tend to maintain pressure.

Asked by C. Andrade of Dallas, an East Texas operator, as to what effect pressure decline has upon water encroachment in the field, Foran answered that if the water does not come in uniformly, as in areas subjected to excessive withdrawals and consequent declining pressures, there is a tendency for oil to be trapped between wells, with the water coming toward the heavily produced well from all directions.

In response to an inquiry from another source Foran said there is considerable waste in East Texas under existing conditions, and that a lower production allowance would afford further elimination of the waste. The present decline in bottom hole pressure in the field is at the rate of about eight pounds per month, he stated.

R. E. Hardwicke, Fort Worth, attorney for the Texas Oil & Gas Conservation Association, asked: "Will the field have a higher recovery of oil if produced at a lower rate?" Foran answered in the affirmative.

"How many barrels should the field produce daily if ideal results are to be obtained?" asked R. J. McMurray, an East Texas producer.

Foran at first declined to name any specific figure, explaining that it would be a presumption on his part to attempt to tell the railroad commission what allowance should be set for the field, if any. But upon further insistence, he said that certainly, for the best interests of the field, production should not be allowed in excess of 375,000 barrels daily.

C. Andrade, Dallas, head of Imperator Oil Company, which operates in the East Texas field, subjected Foran and also other witnesses to numerous questions. Bringing up the subject of water encroachment, he asked what dif-

(*Continued on page 47*)

E. V. FORAN, consulting engineer, Fort Worth, Texas, offered outstanding testimony February 12 at Austin in the railroad commission's hearing on the East Texas field, serving as representative of the Texas Oil and Gas Conservation Association, which is an organization of state-wide scope made up of small and large oil operators and land and royalty owners and which is dedicated to the conservation of the state's natural resources.

E. V. FORAN

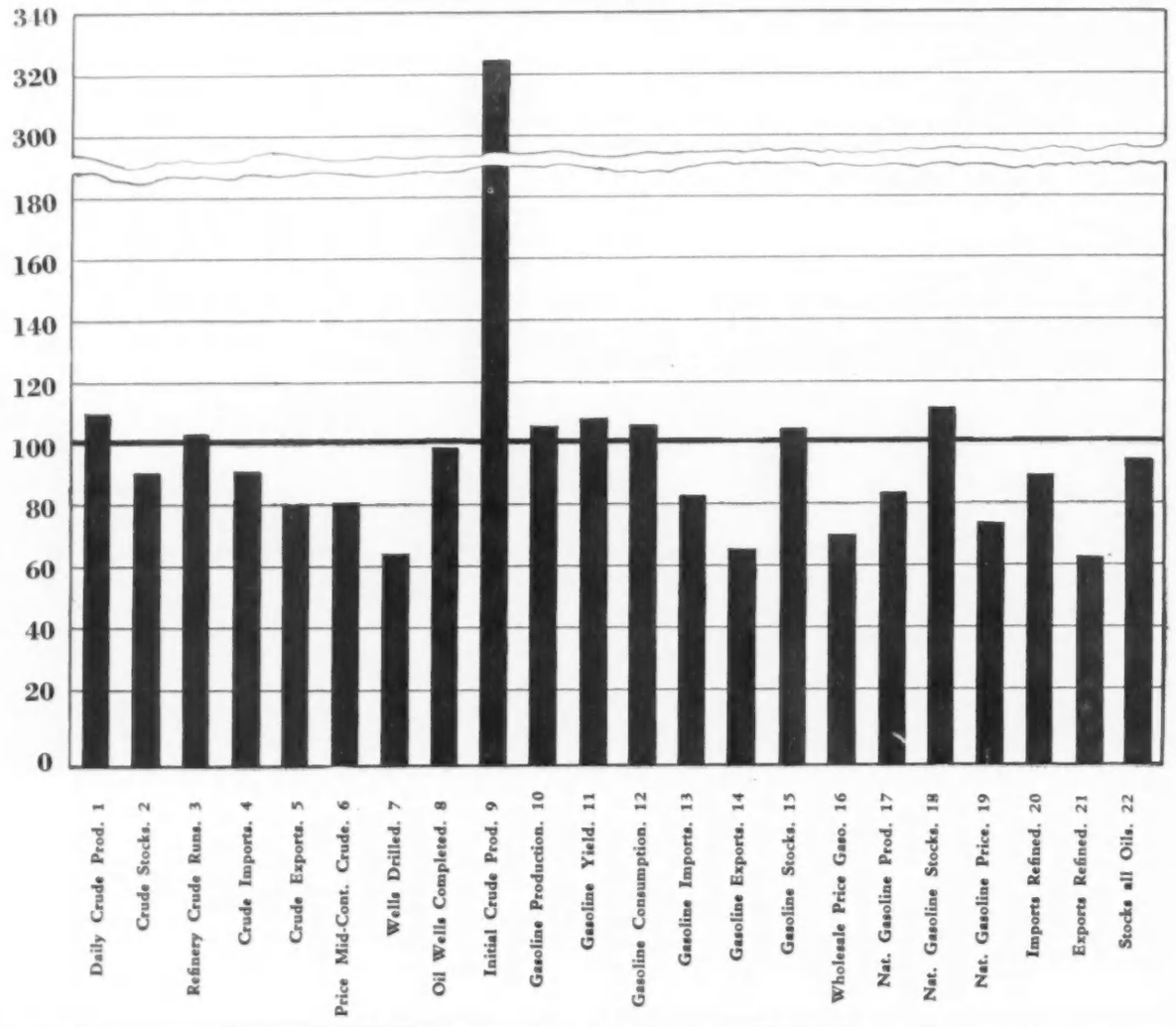
Mr. Foran has spent approximately a decade in the petroleum industry, having entered it in June, 1922, with Mid-West Refining Company in that concern's gas department, and he was later assistant natural gas engineer with the United States Bureau of Mines at the Salt Creek field, Wyoming. He came to Texas in 1926, and from that time to now has served as consulting petroleum engineer, his activities embracing work in different sections of the state for various oil and gas companies and operators. The recognition which has been given his work is reflected in the fact that he has been called upon to deliver several papers before the American Petroleum Institute and the American Institute of Mining and Metallurgical Engineers.

From May, 1931, to January, 1932, Foran was technical advisor to the Central Proration Committee, an organization which was devoted to conserving oil and gas in Texas, but which no longer exists, the activities in which it was interested being furthered for the most part now by the above mentioned larger Texas Oil and Gas Conservation Association. It was in the recent Austin hearing that Foran first represented the latter organization.

Mr. Foran is a native of the state of Washington, having been born at Seattle on May 1, 1895. He attended the University of Washington at Seattle, but his college training was interrupted when he served two years overseas in the Eighteenth Engineers during the World War; and he completed his college education at the University of Idaho, where he received the degree of Mining Engineer in 1921.

**EXISTING allowance of 75 barrels daily per well is declared satisfactory to large proportion of operators, and "per well" basis of restriction is supported.**

## Salient Oil Industry Factors for December, 1931, Expressed in Per Cent of December, 1930. Heavy Line (100) Represents December, 1930




## Oil Industry Barometer—December, 1931

### Index of Salient Factors—Current and Cumulative

| | Factors— | This Month | | | 12 Months Ending Dec. 31 | | |
|---|---|---|---|---|---|---|---|
| | | Last Year | This Year | Index [1] | Last Year | This Year | Index [1] |
| 1 | Daily Average Crude Production (Thous. Bbls.) | 2,161 | 2,360 | 109 | 2,460 | 2,329 | 99 |
| 2 | Total Crude Stocks (Thous. Bbls.) | 512,230 | 464,504 | 91 | 512,230 | 464,504 | 91 |
| 3 | Refinery Crude Runs (Thous. Bbls.) | 71,581 | 72,726 | 102 | 927,447 | 893,627 | 96 |
| 4 | Crude Imports (Thous. Bbls.) | 4,727 | 4,315 | 91 | 62,129 | 47,250 | 76 |
| 5 | Crude Exports (Thous. Bbls.) | 1,339 | 1,071 | 80 | 23,705 | 25,546 | 108 |
| 6 | Posted Price 36 Gravity Mid-Cont. Crude (Per Bbl.)[2] | $.95 | $.77 | 81 | $1.23 | $.62 | 50 |
| 7 | Wells Drilled | *1,479 | *950 | 64 | 19,848 | 11,716 | 59 |
| 8 | Oil Wells Completed | * 650 | * 636 | 98 | 10,745 | 6,618 | 62 |
| 9 | Initial Crude Production (Thous. Bbls.) | * 979 | *3,171 | 324 | 10,444 | 31,590 | 302 |
| 10 | Gasoline Production (Thous. Bbls.) | 34,352 | 36,053 | 105 | 440,728 | 437,890 | 99 |
| 11 | Gasoline Yield—Average Per Cent of Crude[4] | 42.2 | 45.2 | 107 | 41.9 | 44.4 | 106 |
| 12 | Domestic Gasoline Consumption (Thous. Bbls.) | 29,094 | 30,535 | 105 | 394,800 | 403,319 | 102 |
| 13 | Gasoline Imports (Thous. Bbls.) | 964 | 793 | 82 | 16,927 | 13,621 | 80 |
| 14 | Gasoline Exports (Thous. Bbls.) | 4,386 | 2,871 | 65 | 65,575 | 46,012 | 70 |
| 15 | Gasoline Stocks at Refineries (Thous. Bbls.) | 40,541 | 42,320 | 104 | 40,541 | 42,320 | 104 |
| 16 | Refinery Price U. S. Motor Gaso.—Group 3 (Cents)[3] | 4 | 2¾ | 69 | 6¼ | 3 1/3 | 53 |
| 17 | Natural Gasoline Production (Thous. Bbls.) | 4,198 | 3,476 | 83 | 52,631 | 42,966 | 82 |
| 18 | Natural Gasoline Stocks (Thous. Bbls.) | 578 | 644 | 111 | 578 | 644 | 111 |
| 19 | Price Grade "A" Natural Gasoline, Group 3 (Cents)[3] | 3¾ | 2¾ | 73 | 5¼ | 3 1/5 | 61 |
| 20 | Imports of All Refined Oils (Thous. Bbls.) | 3,310 | 2,903 | 88 | 43,489 | 38,832 | 89 |
| 21 | Exports of All Refined Oils (Thous. Bbls.) | 9,729 | 6,102 | 63 | 132,794 | 98,969 | 74 |
| 22 | Total Stocks of All Oils (Thous. Bbls.) | 665,497 | 621,984 | 93 | 665,497 | 621,984 | 93 |
| | Weighted Index of Supply | ..... | ..... | 115 | ..... | ..... | 111 |
| | Weighted Index of Demand | ..... | ..... | 83 | ..... | ..... | 90 |
| | Weighted Index of Prices | ..... | ..... | 74 | ..... | ..... | 54 |

*Exclusive of Rocky Mountains. [1]—Last Year—100.
[2]—Weighted Average. [3]—Monthly Average.
[4]—Straight run and cracked gasoline only.

# Stocks Mounted in December With Production Off

By H. J. STRUTH
*Staff Economist*

STOCKS of all oils in the United States turned sharply upward in December, according to the monthly report of the Bureau of Mines. On December 31, stocks of all oils aggregated 621,984,000 barrels, representing a gain over stocks held on November 30 of slightly over 3,000,000 barrels. Compared with the total on hand at the close of the preceding year, however, there was a net decline in stocks last year of about 43,500,000 barrels. Crude stocks on December 31 amounted to 464,504,000 barrels, against 463,079,000 barrels on November 30. This indicates that nearly half of the increase in all stocks in December was caused by increased crude oil inventories. In fact, the increase in crude stocks was practically all recorded in the Mid-Continent area, since there was actually a small decrease in crude stocks held in California. Practically all producing areas of the United States, however, contributed to the general decline in crude stocks which was recorded for all of last year. Crude oil inventories were apparently drawn upon last year to the extent of nearly 48,000,000 barrels.

### Refined Stocks Increased

It is apparent from the preliminary figures for 1931 that stocks of refined oils were increased, the difference between stocks of all oils and crude stocks indicating a gain of 4,500,000 barrels. This emphasizes the unsatisfactory conditions which prevailed in the refining branch of the industry last year and undoubtedly constituted the major cause of depressed markets last year. Comparison of refined product stocks for December 31, of 1931 and 1930, shows that inventories of gasoline, gas and fuel oils, coke and miscellaneous products were all increased last year. Stocks of kerosene, lubricants and wax, however, recorded a decline under the preceding year. It is also apparent that a consistent increase in recovery of gasoline from crude oil, accompanied by only a slight decline in crude run to refinery stills, was the chief factor in over-production of both gasoline and fuel oil. This situation, coupled with a severe decline in export shipments of both gasoline and fuel oil, undoubtedly had a marked adverse effect upon the industry's general market structure.

Significant facts contained in the December report of the Bureau of Mines were: an increase in daily average production of crude oil over December, 1930; an increase in crude imports over November and a sharp slump in exports of crude; a gain in refined oil imports and a further sharp decline in exports; an increase in domestic gasoline consumption of 4.6 per cent above December of the preceding year; increases in stocks of both crude and refined products. Daily average crude oil production was about 68,000 barrels less than in November, but was 200,000 barrels above the rate recorded in December of 1930. Nevertheless, the daily average for 1931 was 2,329,000 barrels, against 2,460,000 barrels in 1930. Crude oil, as well as refined products, imports turned sharply upward in the final month of last year, while exports slumped in both departments. Crude exports dropped to the lowest point of the year, with a total of only 1,071,000 barrels, against 2,449,000 barrels in November. Exports of refined products dropped from 8,068,000 barrels in November to but 6,102,000 barrels in December.

One factor that could be construed as favorable in December, was a decline in gasoline production, principally because of a lower rate of recovery from crude oil. The yield of gasoline from crude in December declined to 45.2 per cent, from a rate of 46 per cent in November. While runs of crude to stills showed an increase over November of about 1,400,000 barrels, cracked gasoline production was approximately the same as the total reported in November; 15,055,000 barrels against 15,024,000 barrels. Of further favorable influence in December was the steady rate of domestic gasoline consumption, which showed an increase over the same period of 1930 of 4.6 per cent and a gain for the year 1931 of approximately two per cent. The top-heavy gasoline situation, however, contributed to a lower wholesale market, resulting in a recession in refinery values of about 1⅝ cents a gallon for U. S. motor gasoline in Group 3. On the other hand, crude oil prices remained constant throughout December, but ranged about 19 per cent below the average posted price received in December 1930.

### New Wells Lower

Gradual reduction in well allowables in the East Texas area has undoubtedly had some effect upon new developments. In December, when the well allowable amounted to 100 barrels per well, the number of wells completed in East Texas declined. As a result, the number of wells completed in the United States, outside of the Rocky Mountain area, dropped to 950, against 1,008 in November. Initial oil production was also somewhat lower in December than in November, having dropped to 3,171,000 barrels, against 4,314,000 barrels in November. The gain in productivity of new wells completed in 1931, however, amounted to slightly more than 200 per cent, representing an increase in initial over 1930 of more than 21,000,000 barrels.

Practically all of the decrease in crude production in December was recorded by Texas. There, every major district reported lower output. The largest decline was recorded by East Texas, where the daily average dropped from 401,000 barrels in November to 358,000 barrels in December. Production of Oklahoma City and Seminole was also lower in December, but this was more than offset by gains in other fields of that state. The daily average production of California continued steady, at around 500,000 barrels a day.

# Sentiment in Committee Seems To Favor Oil Excise Tax

By ROY E. LEIGH
*Associate Editor*

WASHINGTON.—Pending outcome of deliberations of the ways and means committee in executive session, it is of interest to attempt a forecast of that body's decision with reference to pending oil tax measures. No outsider can guess what is being said behind closed doors; but the type of questions asked by individual members during recent public hearings seems to afford an index as to how these committeemen may vote when a decision is approached.

It is even possible, by such means, to conduct a sort of poll of a majority of the membership. Representatives Morgan G. Sanders of Texas and Heartsill Ragon of Arkansas, for example, were outspoken in their support of the Franklin tax; while Representatives Allen T. Treadway and John W. McCormack of Massachusetts, were equally frank in their hostility toward the measure which, by admission of its proponents, may cause an increase in fuel oil prices in New England and along the Atlantic seaboard.

Of the 25 members of the committee, 13 were sufficiently outspoken in the interrogation of witnesses to allow the formation of an opinion regarding their positions, as individual committeemen and congressmen, with regard to the Franklin proposals. By appraisal of the type of questions propounded by each—whether hostile or favorable to protariff witnesses, and vice versa, in the case of anti-tariff spokesmen—it is indicated that 10 of this vocal section of the committee seemed to favor the imposition of an equalization tax of 84 cents per barrel on crude and fuel oils and four cents per gallon on gasoline and refined products, against three whose questions were of such nature as to indicate their opposition. If the percentage thus established can be applied also to the non-vocal section of the committee, majority in favor of the measure indicated.

It is obvious, therefore, that this non-vocal section will hold the balance of power when the final vote is taken. In studying its roster, however, it is difficult to find any other members who might definitely be expected to support it. Since this project cuts straight across both party platforms, being opposed by New England protectionists and favored by certain Democratic opponents of the Hawley-Smoot tariff, it is not possible to find clues regarding the attitude of these silent members by reference to their party allegiance alone. It becomes necessary, therefore, to take recourse to the geography of their constituencies, in search of clues as to how each may vote.

In this category, Acting Chairman Charles R. Crisp of Georgia, and Representatives Christopher D. Sullivan of New York, David J. Lewis of Maryland, Isaac Bachrach of New Jersey, Frank Crowther, of New York and Richard S. Aldrich of Rhode Island, who represent consumers of fuel oil, might, on that account and in absence of other evidence, be expected to oppose the measure. The deciding ballots, therefore, would seem to rest with Representatives Samuel B. Hill and Lindley H. Hadley of Washington, Willis C. Hawley of Oregon, Charles B. Timberlake of Colorado, and Carl R. Chindblom of Illinois, all of whom might be regarded as neutrals between producers and consumers of fuel oil.

One factor which may operate to deter the committee from adopting Franklin's tax suggestion is the fear of precipitating a general tariff discussion at this politically inopportune time. The proposal has been discussed as a revenue measure, in which guise it received a sympathetic hearing; but it also has been called an "equalization tax," a phrase which may find popularity in other quarters as useful in lieu of a tariff. A rose by any other name would smell as sweet; and, if producers of pulpwood, paper, and other commodities now on the free list can secure protection in the form of an "equalization tax," they will not be disposed to insist upon the use of such an objectionable term as "tariff." The greatest fear of proponents of the tariff or equalization tax measure is that it may be buried under an avalanche of such amendments.

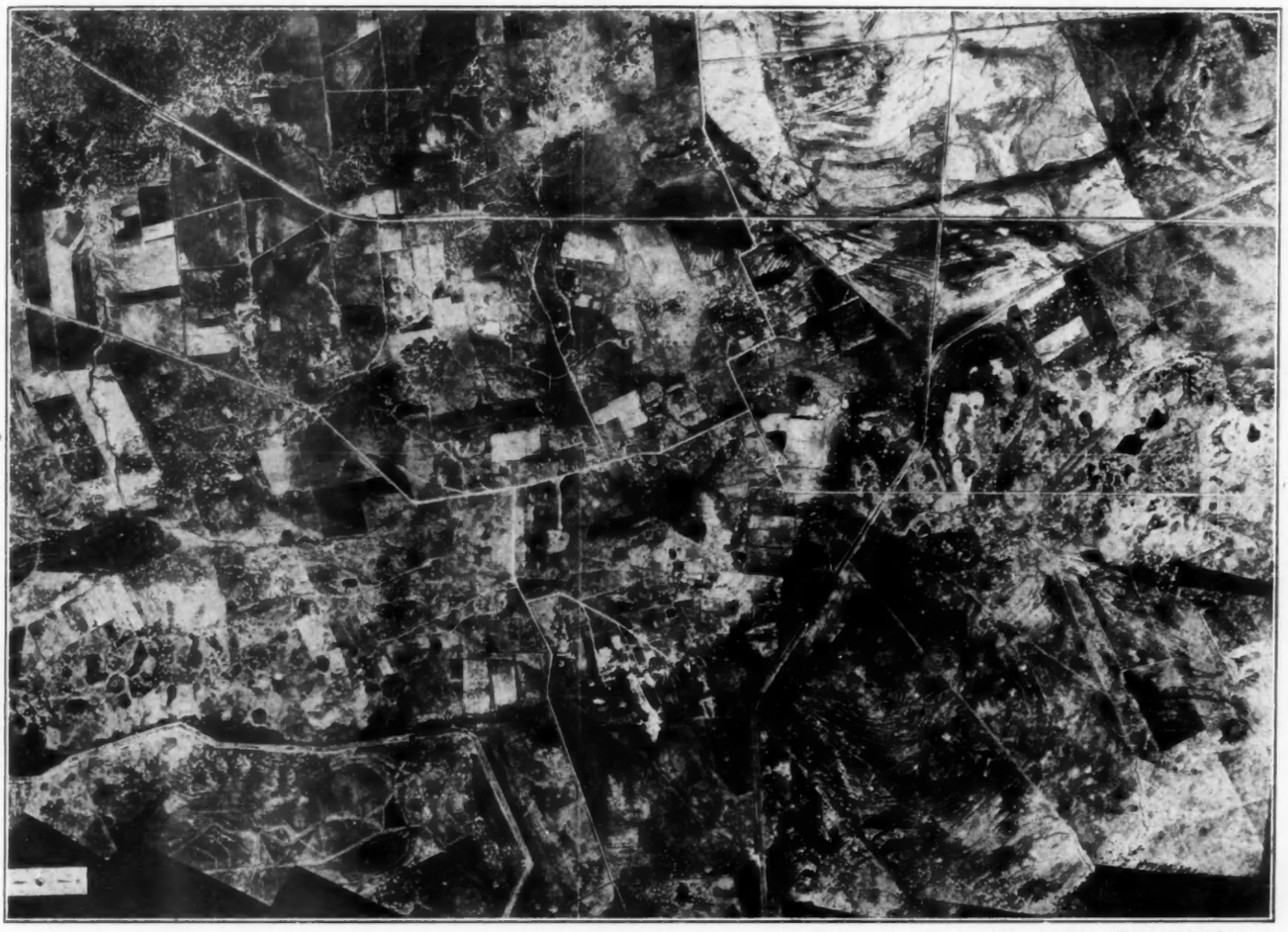
### Excise on Gasoline

Committee members were more guarded in framing their questions regarding the proposed gasoline tax, only five of their number having been sufficiently frank as to indicate their positions on the matter. Of these, Congressmen Hawley, Treadway, Vinson and Rainey seemed to favor the measure, while Congressman Morgan G. Sanders of Texas, is known to be opposed.

The situation with respect to the proposed one-cent federal excise on gasoline, however, is less complex, politically, as it threatens no geographical division and no conflict with established party platforms. For that reason, it has been said that its legislative course is fraught with fewer obstacles; and that, of the two proposals, its final enactment is much more probable than the other.

Revised estimates by Ogden L. Mills of the treasury, and a recent statement by Representative Charles R. Crisp of Georgia, acting chairman of the ways and means committee, are interpreted as favorable developments by students of the situation, from the oil industry's point of view. There is no doubt but that the oil industry was "on the spot" during recent public hearings at Washington, and that some members of the ways and means committee probably entertained the hope that a large part of the additional revenue required might be raised by the establishment of new forms of taxation on oil. It became clear in connection with estimates of the treasury department submitted to the committee last week, however, that neither the one nor the other—nor both—of these oil-tax measures would yield as much as 455 million dollars per annum.

This brings up the necessity of broadening the tax base, in which connection a general sales tax has been discussed in committee. If a general sales tax is adopted, it cannot equitably be made to apply in greater degree to the sale of petroleum products than to the sale of other commodities; and it is upon this point that present hopes of the oil industry are based.



—Courtesy Edgar Tobin Aerial Surveys

**SALT DOME SHOWS ON MOSAIC**

*Like other types of structures, salt domes which are marked by topographic relief show prominently on photographic maps. Barbers Hill dome, Chambers County, Texas, is marked at the surface by a mound of about 50 feet elevation. The dome is shown here, occupying the central portion of the photograph. It is distinguished from the surrounding prairie by the darker soil colors of the latter*

# Aerial Photography in Geological and Geophysical Work

By JACK LOGAN
*Staff Representative*

AERIAL surveys are employed upon an extensive scale by both the geological and geophysical branches of the oil business. Since those two departments are closely allied, they will be treated together in this final article on photographic mapping in the petroleum industry, the geological uses of the surveys to be presented first, and then the geophysical applications.

### Aiding the Geologist

For the petroleum geologist the photographic map is a very valuable tool, applicable in several ways and in various types of country.

In regions of prominent relief the sub-surface conditions are frequently reflected in the surface topography, and the aerial picture may be of great value, indicating structures, faults, contacts, or bedding. Flatter country, in contrast, is more or less featureless, and an aerial map of it may reveal nothing definite as to the underlying strata. Even in flat country, however, the aerial pictures may prove of great and unexpected importance in some instances, giving pronounced indication of faults or structures which are not at all evident to the observer walking over the ground. Even on land which has been changed in appearance by cultivation the pictures may give evidence of faults or other features through stream displacements or differences in colors of soils or vegetation on opposite sides of formation contacts.

In jungle regions the aerial surveys sometimes prove

very effective for the geologist, showing outcroppings of rocks as reflected by relatively scarce vegetation, oil seepages as manifested in the plant life, and folds as evidenced by the drainage. Similarly the photographic maps are applicable in low, marshy country, where they may offer evidence of oil seepages or folding of the earth's crust. In either the marshy regions or the jungle lands the aerial maps may present comprehensive, detailed pictures of country which would be difficult or almost impossible of access for ground observations; and the photographic surveys are obviously superior in such regions from the standpoint of thorough study, for where the vegetation is dense or where the traveling is extremely difficult, an observer on the ground might pass within a few yards of a significant geological feature without seeing it.

Certain localities, it is quite evident, are better suited than others for geological study through aerial photography, but the types of country in which the pictures are applicable to some extent are so varied and numerous that the region in which they are unsuccessful is exceptional. Thousands of square miles of land have been surveyed from the air for the benefit of geologists during the past several years, including particularly extensive areas in California and Texas, while there have also been important applications of the work in other oil producing states of the United States and in Mexico, Canada, and other foreign countries.

### Uses of Aerial Maps for Geologists

In connection with geological investigation an aerial survey has three outsanding uses, as follows: (1) as a reconnaissance map, to be studied for the geological information recorded on it by the camera; (2) as a guide map, helping the geologist to find his way around on field trips; and (3) as a base map on which the geologist may record field observations.

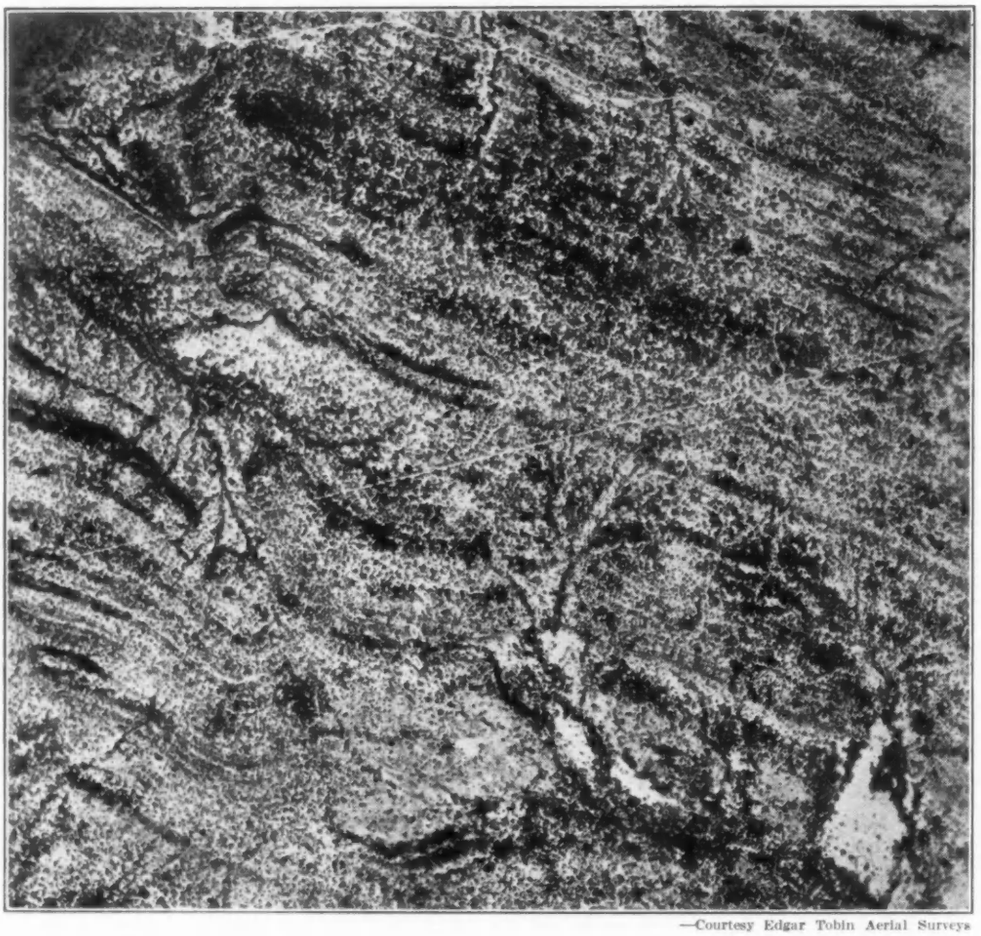
### The Aerial Survey as a Reconnaissance Map

Being an all-inclusive, detailed, photographic mosaic, the aerial survey constitutes for the geologist a reconnaissance or source map of the highest order. Before he has even seen a region he can become informed to a large extent as to its geological features through the data revealed by the aerial pictures. Examining and interpreting the map, he can gain a comprehensive understanding of the geology of the region, although he may be induced by the information shown on the mosaic to study particular localities later in more detail and at closer range through field work or through further photography or observation from the air.

Using the aerial survey as a reconnaissance or source map, the geologist finds upon it a wide variety of significant data. Anticlines, domes, faults, formation contacts, isolated exposures, and other geological conditions of importance are manifested through stream patterns, dipping beds, color changes in soils, or differences in vegetation due to variations in soils.

Aside from being able to study any local condition on the map, the geologist can see a whole, extensive region with one view and can therefore interpret the local area in its relation to other local areas and to the whole. A condition which may appear unimportant locally may assume significance from the broader, regional viewpoint.

In the interpretation of the data which he finds upon the



—Courtesy Edgar Tobin Aerial Surveys

**FAULTING SHOWS ON PICTURE**

*There is a pronounced suggestion of faulting in this aerial photograph of a region in northern Mexico, the disturbed strata indicating the existence of a fault extending upward and slightly to the left from the lower right corner of the photograph*

**COLOR DIFFERENCES OF SOIL AND VEGETATION HAVE GEOLOGICAL SIGNIFICANCE**

*In this picture is the semblance of a circle, due, apparently, to banding in the soil and vegetation. This condition, which is not visible on the ground, was originally interpreted by observers of the picture as the surface manifestation of a salt dome. The presence of a dome near this area was also indicated by geophysical prospecting.*

*Drilling and additional geophysical work, however, have led to the opinion by some authorities that the area shown in this picture is too far from the salt plug to be related directly to it. Whether or not it is really a manifestation of the dome, this unusual circle on the aerial photograph would have been sufficient within itself in the absence of geophysical or other evidence to call particular attention to the general area, and in consequence it would probably have led to the discovery of the dome.*

*The area which is shown has a width of about two miles.*

—Courtesy Edgar Tobin Aerial Surveys

Courtesy Fairchild Aerial Surveys, Incorporated

**VIEW IN THE EAST TEXAS FIELD**

*The area surrounding the discovery well of the Lathrop or Longview district of the East Texas field appeared in the spring of 1931, as shown on this oblique aerial photograph*

—Courtesy Edgar Tobin Aerial Surveys

**GEOLOGICAL EVIDENCE OFFERED BY AERIAL MOSAIC**

*Erosion and faulting are indicated on this aerial map, made of pictures taken with the camera pointing down vertically. The area is in Crockett County, West Texas, adjacent to the Pecos River and near the Yates oil field*

photographic map, the geologist may frequently gain material assistance through the use of the stereoscope. As described previously in detail, the stereoscope is an instrument, embodying a system of mirrors, by means of which the ground shown on the aerial photographic map may be made to appear in relief, two adjacent and overlapping prints being placed under the instrument, and the common territory included on both showing up in third dimension.

Anticlines or structural "highs" may be identified on aerial maps by radial drainage, pronounced surface relief, dipping strata, and the downdip bowing of contacts and beds in the valleys. Salt domes are reflected in many instances by circular or elliptical color changes.

Contacts between formations may be traced upon an aerial map by noting soil color differences or differences in the natural or cultivated vegetation sustained by the different soils. Showing those color changes, the aerial survey will sometimes reveal contacts which are not apparent on the ground.

Faults may sometimes be discerned through the same color change evidence which reveals contacts, since the fault lines also represent contact lines in many instances. Color variation, similarly, may indicate a fault even where the fracture is not identical with a contact, for the ground immediately adjacent to the fault and directly affected by it may have different color or support different vegetation from that on either side of the fault. Other pronounced indications of a fault may be offered by displacement of streams or by horizontal displacement of outcrops, and in many instances escarpments which are associated with faults loom up prominently on the aerial pictures. While the aerial map reveals some faults which are not apparent on the ground, as well as most of the more prominent faults, however, it is not infallible, and some important faults are worked out on the ground which do not show on the aerial maps because they are hidden by surface deposits and erosion.

### The Aerial Survey as a Guide Map

In its second application by the geologist, that is, as a guide map or a key map, the aerial survey proves its value in field work as contrasted with its use in the office in the reconnaissance application. Having picked out in the reconnaissance study of the mosaic those features which appear significant, the geologist may next go into the field and, using the mosaic as a guide, find those features on the ground for detailed, first-hand examination. The aerial map helps him to find his way around and to reach the localities in which he is interested. Similarly, if he desires to supplement the original photographic reconnaissance merely with additional aerial pictures or with direct observations from an airplane, the aerial map will guide him to the local areas which he considers worthy of more detailed investigations.

### The Aerial Survey as a Base Map

The third mentioned geological application of the aerial survey, namely, as a base map, is closely related to the second use in that it is made in connection with field work. Having made a general study of a region by consulting the

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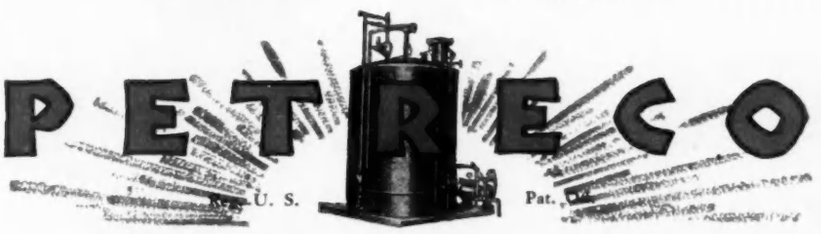


*Fully covered by process and apparatus patents.*

—Courtesy Edgar Tobin Aerial Surveyr

**GEOLOGICAL EVIDENCE OFFERED BY AERIAL MOSAIC**

*Erosion and faulting are indicated on this aerial map, made of pictures taken with the camera pointing down vertically. The area is in Crockett County, West Texas, adjacent to the Pecos River and near the Yates oil field*

photographic map, the geologist may frequently gain material assistance through the use of the stereoscope. As described previously in detail, the stereoscope is an instrument, embodying a system of mirrors, by means of which the ground shown on the aerial photographic map may be made to appear in relief, two adjacent and overlapping prints being placed under the instrument, and the common territory included on both showing up in third dimension.

Anticlines or structural "highs" may be identified on aerial maps by radial drainage, pronounced surface relief, dipping strata, and the downdip bowing of contacts and beds in the valleys. Salt domes are reflected in many instances by circular or elliptical color changes.

Contacts between formations may be traced upon an aerial map by noting soil color differences or differences in the natural or cultivated vegetation sustained by the different soils. Showing those color changes, the aerial survey will sometimes reveal contacts which are not apparent on the ground.

Faults may sometimes be discerned through the same color change evidence which reveals contacts, since the fault lines also represent contact lines in many instances. Color variation, similarly, may indicate a fault even where the fracture is not identical with a contact, for the ground immediately adjacent to the fault and directly affected by it may have different color or support different vegetation from that on either side of the fault. Other pronounced indications of a fault may be offered by displacement of streams or by horizontal displacement of outcrops, and in many instances escarpments which are associated with faults loom up prominently on the aerial pictures. While the aerial map reveals some faults which are not apparent on the ground, as well as most of the more prominent faults, however, it is not infallible, and some important faults are worked out on the ground which do not show on the aerial maps because they are hidden by surface deposits and erosion.

### The Aerial Survey as a Guide Map

In its second application by the geologist, that is, as a guide map or a key map, the aerial survey proves its value in field work as contrasted with its use in the office in the reconnaissance application. Having picked out in the reconnaissance study of the mosaic those features which appear significant, the geologist may next go into the field and, using the mosaic as a guide, find those features on the ground for detailed, first-hand examination. The aerial map helps him to find his way around and to reach the localities in which he is interested. Similarly, if he desires to supplement the original photographic reconnaissance merely with additional aerial pictures or with direct observations from an airplane, the aerial map will guide him to the local areas which he considers worthy of more detailed investigations.

### The Aerial Survey as a Base Map

The third mentioned geological application of the aerial survey, namely, as a base map, is closely related to the second use in that it is made in connection with field work. Having made a general study of a region by consulting the

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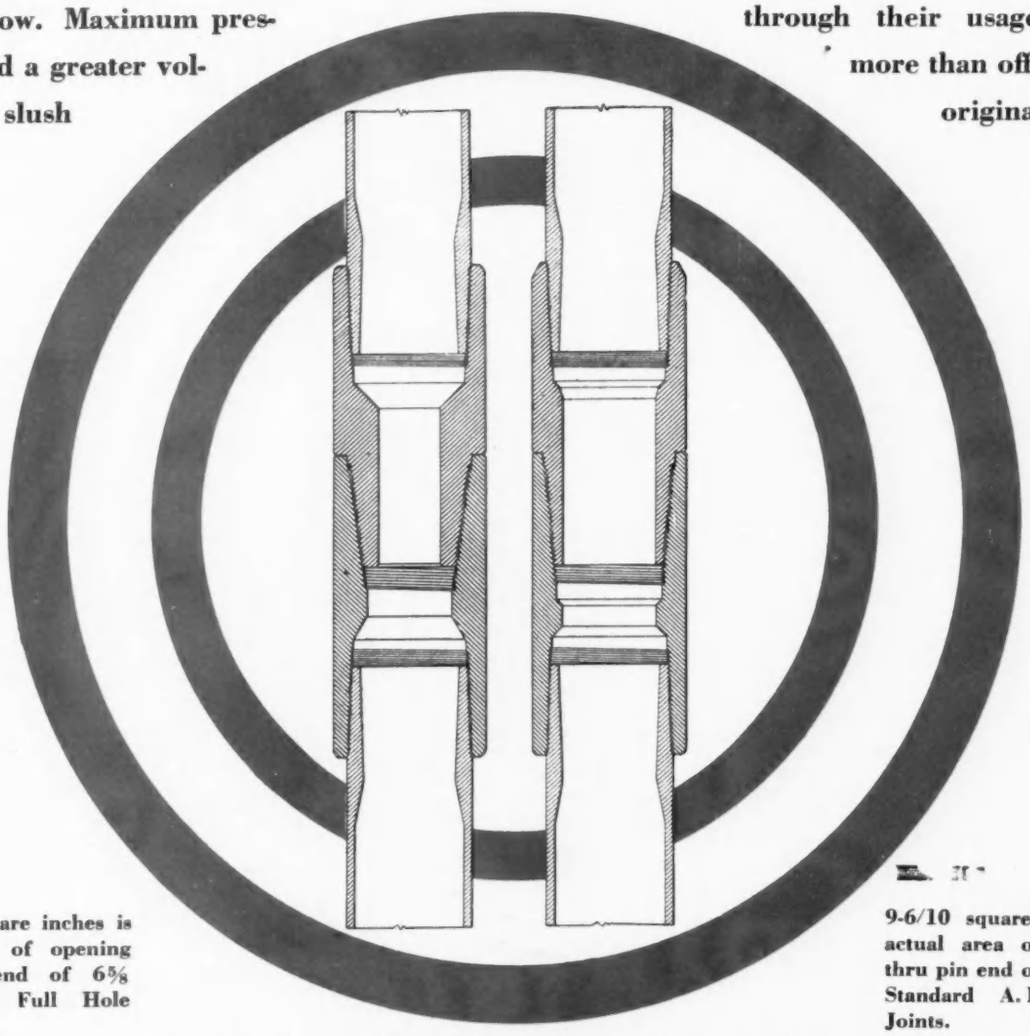

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photographic map, and having gone into the field with the aerial map as a guide, finding a promising local area which had appeared on the mosaic, the geologist looks around for more minute information and evidence, and then arises the third application of the aerial mosaic, as a base map on which he can conveniently record his observations. In like manner, if the supplementary investigation is carried out by means of direct observations from an airplane, the additional data which may be procured can be recorded upon the aerial map.

### Making of Photographs for Geological Study

In most aerial surveying for geological purposes, the best results are obtained with pictures taken from heights of 8000 to 12,000 feet. As explained previously, the original mosaic may be reduced to a smaller scale or enlarged to a larger scale, depending upon the particular requirements which the map must fulfill. In geological work both the scale of 1000 feet to the inch and that of 2000 feet to the inch are practical, and both are used extensively. The smaller scale, however, offers the advantages of smaller cost per unit of area and of greater area per contact print or per stereoscopic pair; and in further advocacy of the map of the scale of 2000 feet to the inch the contention may be made that it shows practically everything of geological importance which appears on the map having the larger scale of 1000 feet to the inch.

As in most other scientific work the aerial photographs which are employed in geological work are made regularly with the camera pointing vertically downward. Oblique views are valuable to the geologist in some instances, however, and to serve those special requirements the oblique views may be photographed.

Cloudless skies and absence of haze contribute always to good results in aerial photography, and those favorable flying conditions are particularly necessary for good results in making aerial pictures for geological study, since such investigation naturally requires clear recording of the features on the ground.

Other factors which have important influence upon the appearance and effectiveness of aerial pictures include the season of the year and the time of the day at which they are made, and those factors are given due consideration in the careful planning of an aerial surveying flight or in expert interpretation of the photographs.

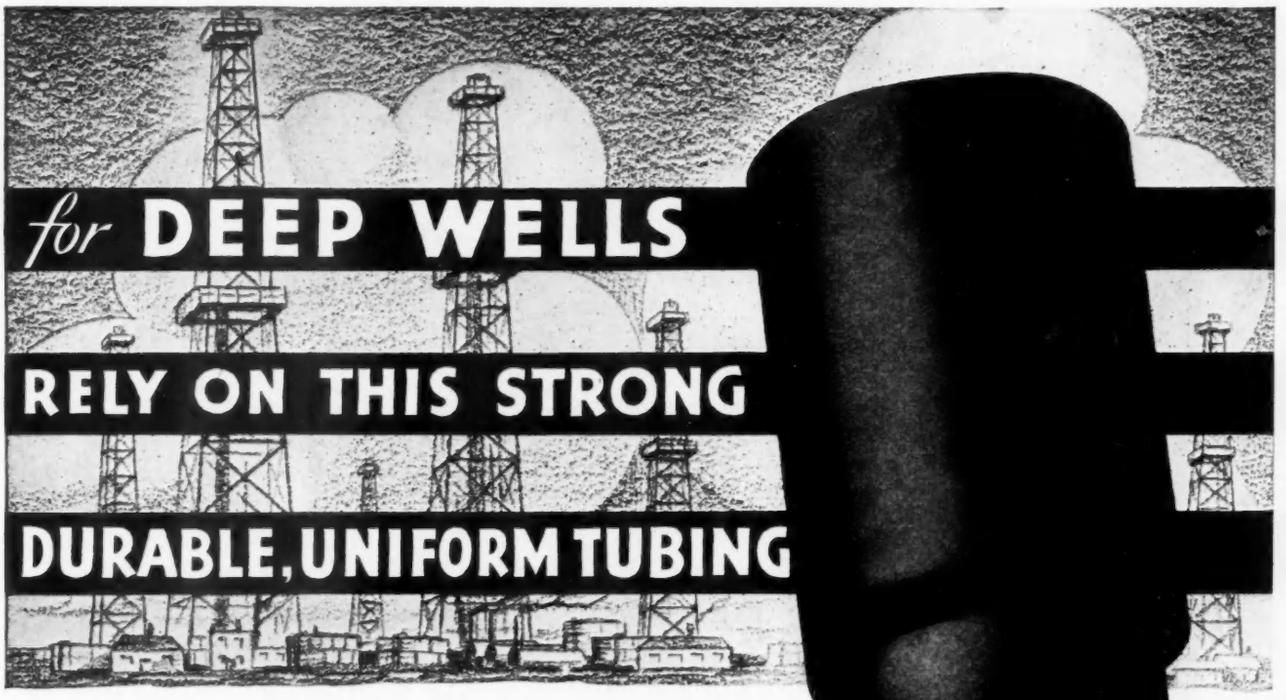
Aside from the unfavorable weather conditions which are commonly encountered in those seasons, for example, the fall and winter offer the important disadvantage of general absence of color differentiation of vegetation, all trees, plants and grass being of a rather uniform brown shade, and resulting in relatively flat pictures. In the spring and summer seasons, on the other hand, each type of vegetation has its characteristic shade of green coloring, which is recorded on the aerial map; and as explained previously the different types of plant life reflect separate kinds of soils, and may consequently indicate formation contacts or other important geological evidence.

The time of day most advantageous for taking aerial pictures for geological study depends upon the particular purposes which they are to serve. If the chief purpose of the map is to show topographic details, the photographing

—Courtesy Fairchild Aerial Surveys, Inc.

**OBLIQUE PICTURES AID IN GEOLOGICAL STUDY**

*Drainage and changes in vegetation are readily apparent on aerial photographs. This is an oblique view, photographed for geological purposes in Tom Green County, West Texas, near San Angelo*



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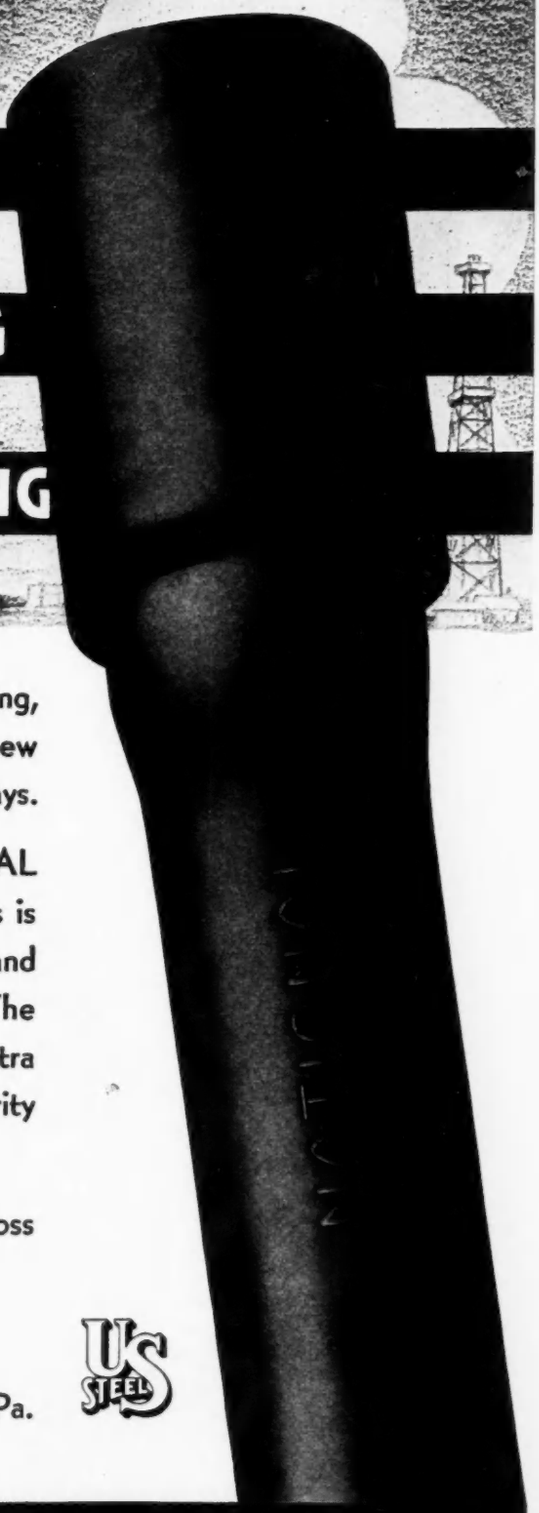

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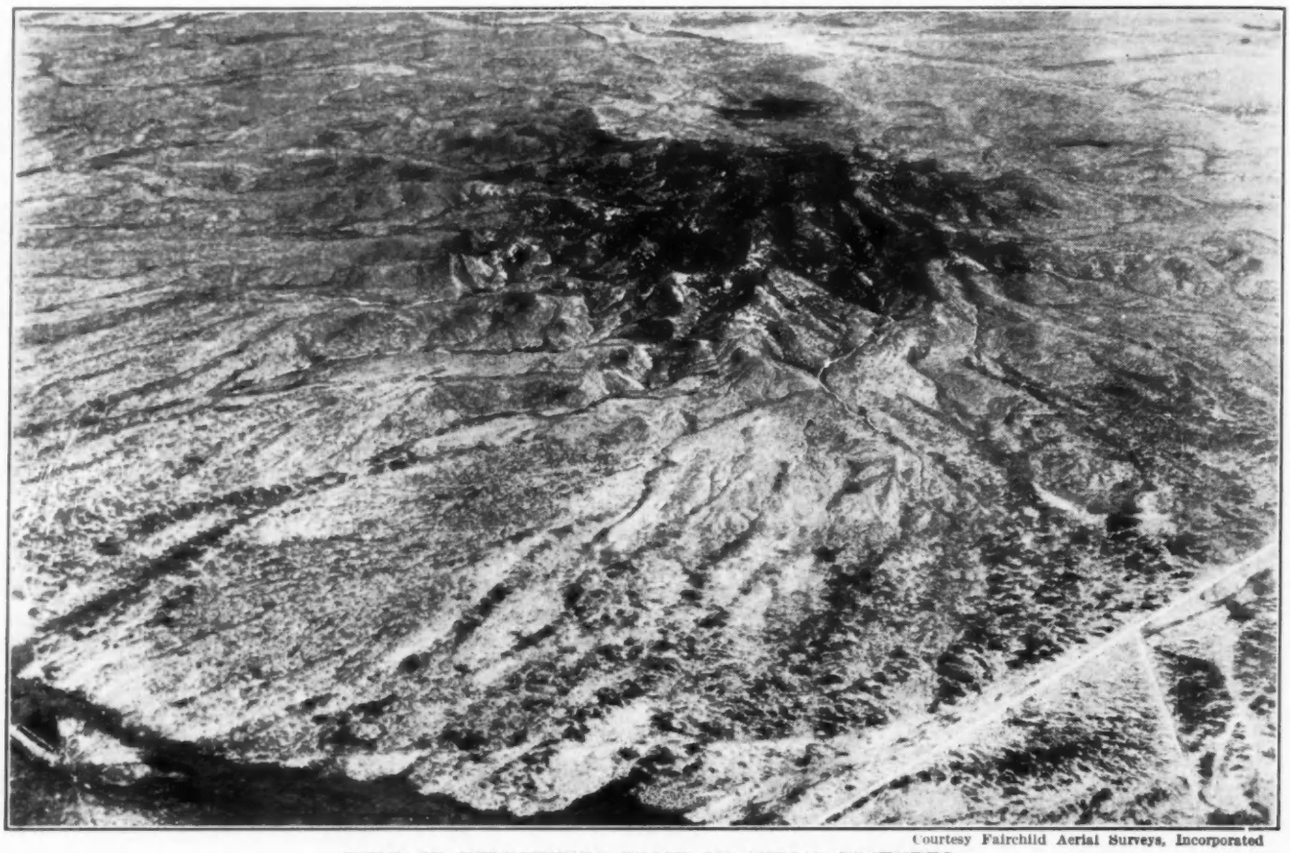

Courtesy Fairchild Aerial Surveys, Incorporated

**SURFACE STRUCTURES SHOW ON AERIAL PICTURES**

*Topographic "highs" or uplifts sometimes show prominently on aerial photographic maps, and the maps in such instances are valuable to geologists, since the surface structures may reflect sub-surface structural conditions favorable for petroleum accumulation. This picture shows the Sierra Madre uplift in Pecos County, West Texas. The photograph, an oblique view, was taken from an altitude of 7500 feet, and it includes an area approximately 3½ miles by four miles*

is done early enough in the morning or late enough in the afternoon for shadows to show prominently. But if the purpose is to show such minute information as the details of the bedding, shadows constitute a disadvantage, the minor features being lost on the photographs in the dark spots representing the shadows, and achievement of the desired results necessitates the making of the pictures around noon, when the sun is high in the heavens.

**Uses of Aerial Surveys in Geophysical Work**

For the geophysicist working in the oil industry the aerial photographic map serves two principal purposes. In the first place the photographic maps afford valuable aid in the carrying out of the geophysical explorations, and in the second place they constitute reliable and convenient base maps for permanently recording the results of the exploration work and consequently for correlating work in different localities.

Two types of geophysical work which have proved particularly successful and which have consequently been employed extensively are the explorations with torsion balance machines, and the investigations with seismic instruments. In connection with both of these kinds of work the aerial photographic maps are successfully applicable.

Used in torsion balance surveys, the aerial mosaics are very desirable base maps, showing all roads, streams, marshes, woodlands and other data, and consequently aiding greatly in the systematic planning of the program of work. Each station may be indicated upon the map in its exact location, and all traveling which is done in connection with the survey is facilitated through application of the aerial map as a road map. After the field work has been completed the aerial survey may be made into a permanent record of the investigation.

As in torsion balance explorations, the aerial survey constitutes an excellent base map for use in planning a seismograph survey of an area. With the aid of the map the seismograph crew can methodically determine the most effective method of procedure, selecting accessible and if possible convenient locations for its work, and becoming informed in advance of obstacles and adverse conditions, which may then be avoided or more successfully met. Every road and lane is indicated on the photographic map; and through the use of the map movement of the crew from one location to another is greatly facilitated.

The use of photographic maps in "shooting" an area with seismographs results ordinarily in material savings in dynamite, to say nothing of savings in time. It is estimated that the use of the aerial map reduces the number of shots which are required by at least 15 per cent, using an average figure for different kinds of country.

As explained previously, an aerial map which is made through use of corrected prints embodies error or inaccuracy of less than one per cent, and distances between shooting points and recording instruments can therefore be scaled from such a map with error so small as to be negligible in many practical applications.

Used in connection with any geophysical exploration, the aerial map by virtue of systematizing and simplifying the work makes for both greater speed and greater accuracy. The first of those factors, speed, in turn, may be translated sometimes into definite time and monetary savings which more than offset the cost of the survey; the other factor, accuracy, represents a net return in such instances.

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# Kettleman Hills Is Drilling Research Laboratory

## Modification of design and application of equipment to meet local conditions affect field practice throughout the world

By BRAD MILLS
*Staff Representative*

EXPERIMENTS and new drilling practices during the past year at Kettleman Hills have provided the basis for a broad research policy which may ultimately affect development all over the world. Modifications in the design and use of equipment, and the inauguration of several entirely new practices have made good the prediction that the field would become a great proving ground. Among the new and unusual experiments conducted during the year, many were valuable contributions to drilling progress; others failed to show an improvement over former methods; while several proved of little value. In many cases failures led to more favorable developments, however.

A comparison of equipment and methods used in the drilling of the first few wells with that used in some of the most recent completions does not show a decided change in fundamentals. The same basic rules are followed, but for many reasons it is now easier to drill to 9000 feet than it was to reach 7000 feet with a weaker technique. Just as the modern automobile with a speed of 75 miles per hour uses the same basic principles as the much slower and less efficient machine of a few years ago; so does the most modern drilling layout at Kettleman Hills follow the general plan of the first outfits used. Refinements here and there and the addition of better control and recording instruments have combined to make near-record depths regular occurrences.

Naturally a study of field conditions has led to various changes. One company does not hesitate to change either its equipment or methods to try for better results. A research department follows the progress of each drilling well and changes are made where it is apparent that improvements can be made. Some of the attempted improvements proved boomerangs and more harm than good was done, but these were followed by many changes which proved their worth under most trying conditions. Many old prejudices were broken down and methods changed to conform with prevailing conditions.

Standard Oil Company of California has been experimenting with a pressure "bomb" which it is developing to determine the bottom hole pressure at any level. This is essentially a producing practice, but it may also be used at any intermediate depth while drilling. This instrument consists chiefly of a chamber, which is lowered into the hole, and few working parts. A spring and stylus are used to record only the maximum pressure on a chart. Checks showed a satisfactory accuracy, although the instrument is still in the experimental stage. Straight mechanical principles are employed and the recording is done through a differential in atmospheric and bottom hole pressures.

Drilling under pressure on the Middle Dome brought out several interesting developments to meet exacting conditions. While this method of drilling was not necessarily original in this field, the practice did lead to several novel achievements. High pressure water sands and caving formations were handled on the Middle Dome by Petroleum Securities Company and Standard Oil Company with special pressure equipment which was designed to meet conditions which did not exist on the North Dome. A high pressure water zone was cut below 5000 feet and salt water dissipated the mud in short order. A caving shale also caused trouble and the pressure arrangement was largely instrumental in checking this sloughing. In one Middle Dome well a pump pressure above 1600 pounds was maintained, with a discharge pressure of around 1300 pounds. This naturally necessitated elaborate equipment and retarded speed of drilling. The loss in speed was offset by the saving in drilling mud and less grief with equipment repairs. Two draw works were not absolutely necessary with this method of drilling, but Standard Oil Company of California obtained good results through the use of a very heavy Doheny-Stone draw works, and a lighter Emsco draw works for snubbing in and out of a portion of the drill pipe. The latter draw works was original equipment and proved useful in connection with pressure drilling. It was necessary to snub in drill pipe until the weight was sufficient to overcome the pressure maintained in the upper portion of the hole, and transversely the snubbing out process was necessary to remove the last stands of drill pipe. Maintenance of a uniform pressure while carrying on otherwise normal drilling operations required both care and a variety of special equipment.

### Special Bean Used

The use of a special bean on the discharge line while drilling under pressure proved an efficient medium for maintaining a constant pressure within the mud circuit. The bean used was an adaptation of the Shaffer flow bean and an average discharge pressure of 1300 pounds was held during the drilling of the caving formation. The pump pressure was above 1600 pounds. The adjustment in pressures was based on the tendency of the formation to slough off. The most troublesome streaks were held back through the loss of a small amount of drilling mud. It was found that the worst caving formations could be handled through application of the proper pressure, but the price for this progress was usually the loss of a certain amount of drilling mud to times into the hole.

Another interesting experiment used in connection with drilling under pressure was an unusual arrangement of the

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mud pump suction. The discharge from the well was connected to the suction of the mud pump to make virtually a closed circuit. With a discharge of about 1300 pounds, it was necessary for the pump to step the pressure up only 300 pounds to discharge it to the well at the correct pressure. The hooking of the pump into the circuit was an experiment which admittedly had its hazards, but the saving of a pressure of 1300 pounds also had its advantages, provided the mechanism of the pump could withstand the conservation of such energy. The pump was able to toy with the mud stream to boost it a mere 300 pounds, as expected, but it was also no surprise to note that the sand and cuttings from the well presented a problem. The practice at Kettleman Hills has been to remove sand and cuttings in various ways, and this closed circuit under pressure made the usual equipment useless. Drilling at first was carried on without cleaning the mud, but a special tank was designed and used some before the practice was abandoned. The tank was placed in the circuit between the discharge from the well and the suction of the pump and was designed to operate at pressures up to 2500 pounds. Two screens were built into the tank and removal of the sand and cuttings was accomplished satisfactorily. One pump at a time was used under pressure as a safety measure, and it functioned fairly well under these adverse conditions. While drilling through certain formations, the pump showed no bad effects from cuttings and high intake pressure, but enough was learned to discourage the use of unscreened mud under more normal conditions. The volume of mud flow varied some, as expected, but pressures told the status of the flow within the closed circuit.

Superior Oil Company developed several advanced ideas in drilling Huffman 3, and the speed with which it was completed spoke well for the very advanced practices. This company profited by experiences gained in drilling two wells and Huffman 3 represented a well defined plan of attack on various problems which have made the North Dome famous.

Super-heating of steam is not new in many industries, but the practice in the oil field has been very limited. A modified form of super-heating has been used by a few companies for some time, but Superior Oil Company was one of the first operators to make full use of the practice. In drilling Huffman 3, some of the steam used was heated to 500° F. to insure best results. Steam pressures up to 250 pounds were used. Wet steam had not proved entirely satisfactory during previous drilling operations, while the equipment at Huffman 3 demanded a smoothness of operation not present with ordinary steam. Super-heating of the steam gave a remarkable acceleration and the drilling engines responded under load to aid in establishing an excellent record on the North Dome. The advantages of super-heated steam were known, but there has long been a doubt in the minds of many operators as to the wisdom of the extra precaution. The equipment at Huffman 3 was heavy and the method of drilling required rapid acceleration. Super-heating of the steam played a good part in the success of the program.

### Used 177-Foot Derrick

The use of a 177-foot derrick in drilling Huffman 3 was a contribution to advanced drilling practice, and many of the handicaps which have hampered operations at other very tall derricks were eliminated through the original design. One of the main objects in building such a tall derrick was to make possible the pulling of six joints of drill pipe at a time. The run around, which would be the fourble in a 122-foot derrick, was 126 feet above the derrick floor. The derrick had a safe load capacity of 1,000,000 pounds, with a safety factor of four. This gave the structure an emergency carrying capacity of 4,000,000 pounds. The derrick had a full 32-foot base. There was no wood under the derrick, the underpinning consisting entirely of steel, while the samson post pier ran all the way down to the mat and was the same height as the corner piers. The sections were so heavy that the erection of the legs was completed in sections. The derrick could have withstood a 70-mile wind, with a full load of 132-foot drill pipe.

### Handling Deep Hard Strata

Improvements and changes in the design of various pieces of equipment have helped in the development of a method of drilling peculiar to Kettleman Hills. Each major field is responsible for a gradual perfection of practices which have not been tried before. The extremely hard formations below 5000 feet were dreaded soon after the discovery well blew in, but penetration of these troublesome strata has become a part of the day's work.

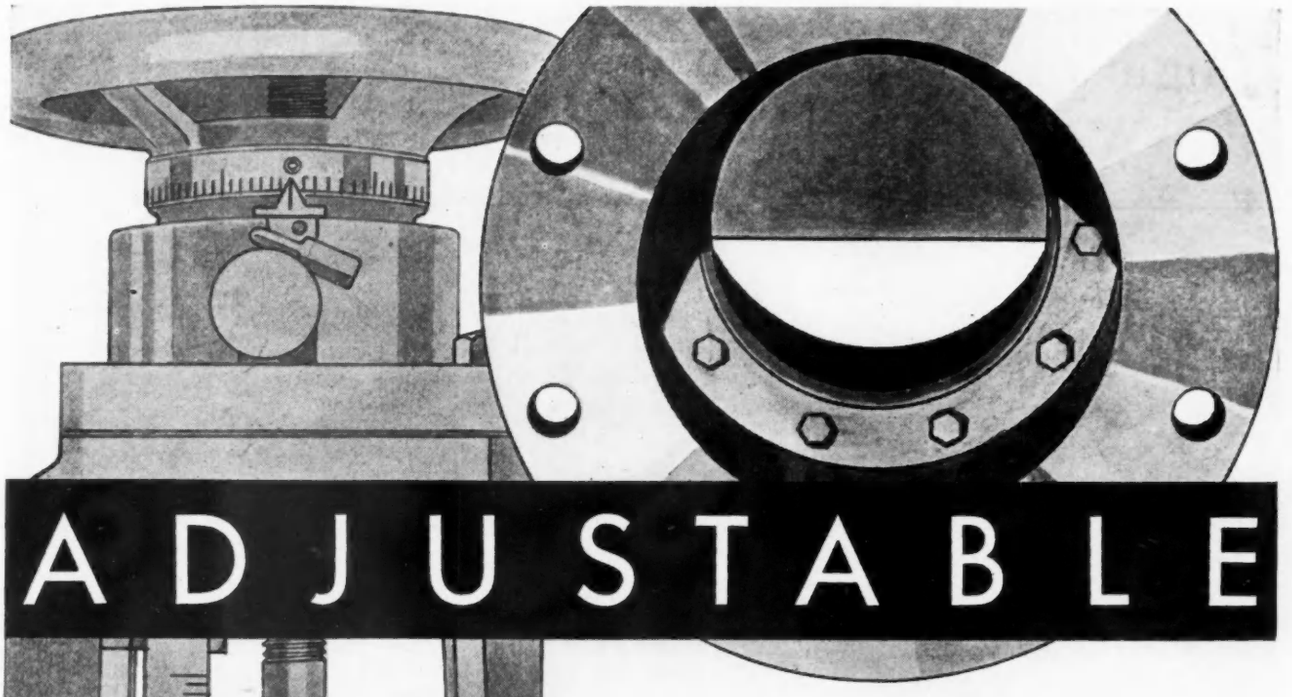
Standard Oil Company of California will try a new type of bit which it has been developing for a special purpose. The company will try for a more hydraulic action and will drill under a slightly higher mud pressure. The discharge of the mud will be at the base of the bit. Experiments along this line have been conducted in other fields, but such a definite plan of improvement has not been carried out. Rapid drilling should be accompanied by less heat where the mud discharge gets a more direct action on the formations under pressure. This should be reflected in a slower wearing of the bit. The study of bits and bit action formed the basis for the new design. The behavior of different types of bits in a variety of formations provided a means of determining the most economical designs.

### Start Small Hole

Drilling of Petroleum Securities Company's Burbank 1, a Middle Dome test, proved the practicability of several new ideas, such as the starting of a comparatively small hole and the use of flush joint casing and drill pipe. A 22-inch hole was started, as compared with 28-inch holes in various North Dome wells. The surface pipe was 16-inch, instead of 20-inch; with 11¾-inch and 8⅝-inch strings, instead of 13⅜-inch and 9⅝-inch strings in many other wells. Starting of a 28-inch hole would have necessitated the removal of around 587 cubic yards of formation, basing the estimate on the depth at which production was expected. Starting of a 22-inch hole and use of flush joint casing necessitated the removal of only 367 yards of formation. There was no definite way to measure the difference in time or energy between the larger and smaller holes, but it was obvious that the drilling of the larger hole would impose a greater strain, make fishing more difficult, increase the danger from collapse of the surface string, and decrease speed in the upper portion of the hole.

The use of flush joint drill pipe and casing in Burbank 1 permitted the maximum size hole below each string of casing. Only 6⅝-inch and five-inch drill pipe was used, the latter size having been used to reach a depth of 9332 feet. Not a single twistoff was recorded with this smaller size drill pipe. This company holds to the theory that it is economical to start the smallest hole which will permit arrival at the bottom with the proper diameter. Starting of a 22-inch hole and use of flush joint casing and drill pipe did the work in Burbank 1.

The picture is constantly changing at Kettleman Hills, and it would be impossible to describe all of the improved practices. Perhaps some which have not been described are more important than some included, but it is hoped that these may be presented as their value becomes more firmly established.



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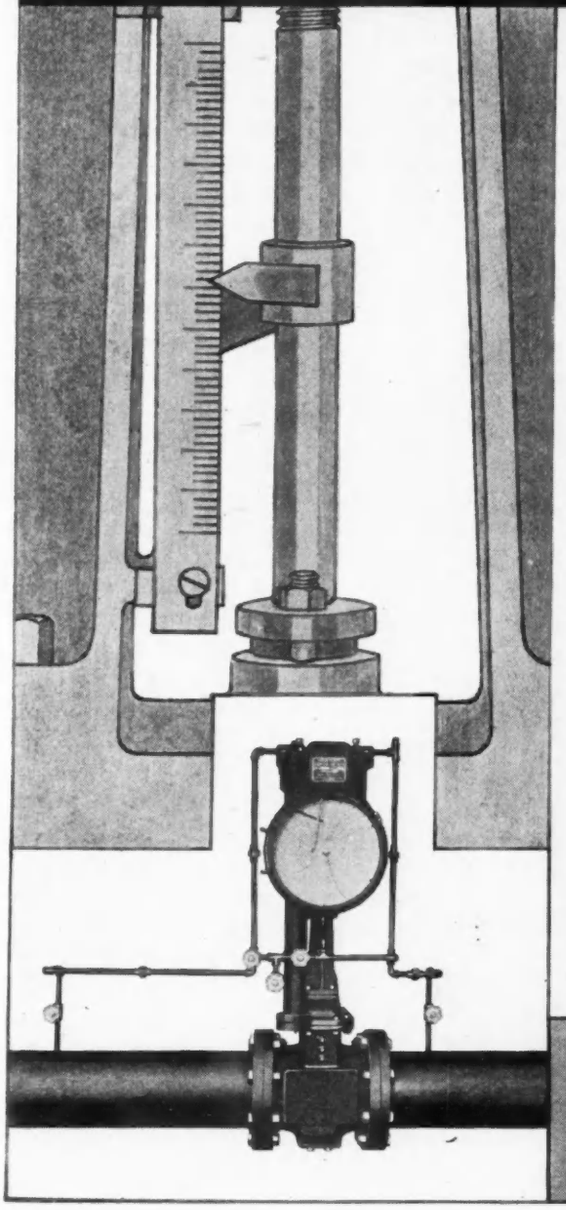

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A more detailed discussion will be found in Bulletin E-15, which will be sent on request.

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# Logic in Association of Oil With Railroad Control

***Being the letters of Paul Peebles, P. S. G., to his sweetheart, Cleopatra, at Goose Creek . . . .***

**Dear Paul:**

You may not remember me, but I am the fellow you borrowed four bits off of when you were in South America. I see by THE OIL WEEKLY that you are thinking of running for the job of being a railroad commissioner in Texas. Why don't you really run for something if you are out for a race? Why not run for governor of Oklahoma?

*Paul "Hisself"*

It don't take much to run on nowadays—and get elected. I guess that it is true that you didn't start no colony in South America but when I saw you in Maracaibo you were broke, so I guess you can qualify, that is if you think fat pork is better body lubricant than Nujol.

If you are elected governor of Oklahoma you can run the corporation commission—which has as its job a part of what you would do as a Texas railroad commissioner, and you'd have an army to boot. I have never heard about you having any relatives, but you might appoint Cleo to something.

Then, after governing for awhile you might be a candidate for President. There have been governors of Oklahoma not as smart as you that have had that bee in their bonnet.

Come on and run—I'm not sure you have to be a citizen to qualify.

Yours,

E. S. (Sucker) Rod.

Skiatook, Oklahoma.

Dear Sucker:

I guess you ain't using your real name on account of local conditions and think I would know who you are by you having lended me four bits in South America, but if I was to answer to all the guys that let me have four bits it would take so much mail that the Houston postmaster would double his contribution to the campaign fund so he could keep his job. That is just by way of telling you how many friends I have got.

And about me starting a colony in South America, I am glad you have come to my defense on account of Roy Leigh come back from down there telling a tale about what I done in Hollywood* which he said was the equivalent of starting a colony. But Roy has been kinder jealous of me ever since him and Joe Elam was running a day at the fair in Shreveport back in 1924 and I stole the show from them.

I APPRECIATE your suggestion about being governor of Oklahoma which might have some attractions, but on account of it being a 4-year job I have got time to try out in Texas first, and after that I will have time to go over in Louisiana and claim to be governor there before it is a chance to run in Oklahoma. You see Louisiana is the easiest, because claiming is free for all over there, and I am well and favorably known in all three states, and also Arkansas.

But I have felt a call to be railroad commissioner in Texas. It is a situation here which requires the iron hand of a masterly man like me which is so much of a diplomat that if anything should happen to go wrong I can have my friends get me appointed to a minister job in some foreign place.

I have decided to make the race for the service I can be to the oil business in this state and at the same time help everybody else in Texas on account of some of the advanced policies which I have in mind.

LIKE this forinstance: It aint nobody in public office in Texas or nowhere's else which sees the relation between railroads and trucks and oil like I do. They just put the oil on the railroads to settle the dust—or I mean put the oil on the commission because they thought it was a good job which was in the way of petering out because the railroads looked like they was going broke and out of business, and anyway they was run from Washington.

WELL this is the way I see it, and you will agree it is statesmanship. Oil is paying taxes which is building roads which is inviting trucks which is hauling freight which is bustin the railroads. Now aint that a tie up?

Well this is the way to untangle it:

Back in Arkansas when I was a boy we got our cotton to town by hauling two bales on a wagon if it was a dry spell. It was some stuck-ups which had good mules and could haul three bales. Well I would make it a rule in Texas that no truck could haul but three bales at a trip. That would be cause for a whole lot of fords and chevies which would make freight for the railroads which would have to haul them in, and also they would have to haul a lot of gasoline on the railroads for the trucks. You see there we would have a cycle which ought to make everybody happy.

But before I go too far I will have to see how they come out up to Austin. The commission is just hearing about East Texas, and Allred is trying to run all the oil business out of the state and it will not need no commission, and then I will want to try on some knee pants to see if I would like to be a diplomat in the case I should need to be promoted.

If it was not too late that it looks like it would not do no good, I would run for congress, on account of it looks like now with the excise tax that Wirt Franklin started we sure do need somebody in Washington which can show congress the error of that way. Seems like the impudents spoke just a few words too many, and the importers talked a lot more than they should.

Your obedient servant,

**Paul Peebles, P. S. G.**

*Mixed quarter in Maracaibo.

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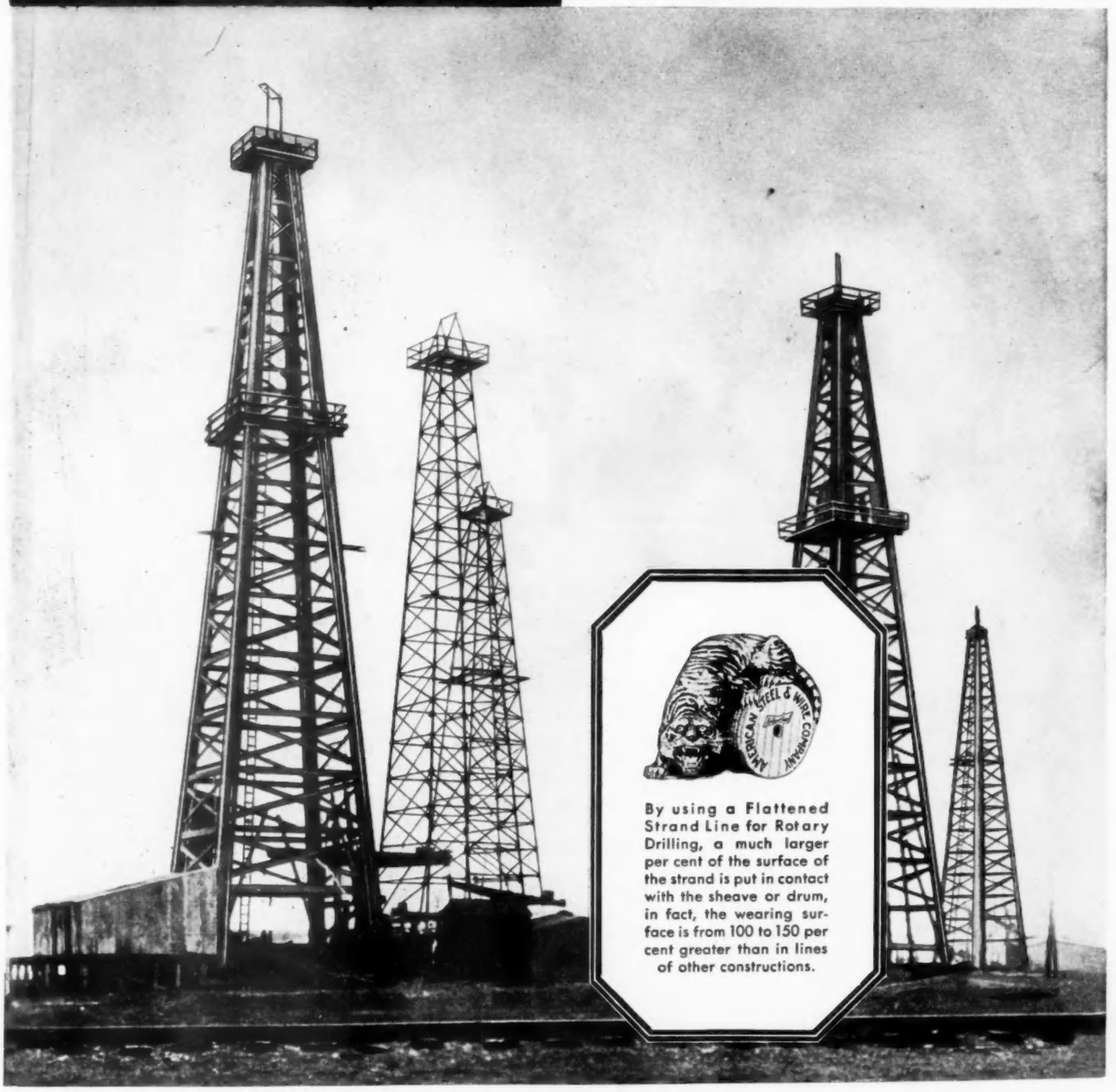


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# LUFKIN UNITS

# Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

## East Texas, Gulf Coast Prevent Production Upturn

Lowering of the well allowable in East Texas to 75 barrels, along with a drop in output of the Gulf Coast area, apparently prevented an upturn in crude production of the United States last week. Aside from the declines recorded in Texas, practically all other fields of the United States staged an increase. The effect of sharply lower production in East Texas and the Gulf Coast, however, resulted in a net decline in U. S. production last week of 14,400 barrels, bringing the production curve down to a daily average of 2,138,300 barrels.

Under the new curtailment order in effect in East Texas, production of that area dropped to 327,500 barrels, against 349,250 barrels in the preceding week; a decline of 21,750 barrels. In the Gulf Coast, there was a decline in production of 4100 barrels, with the Texas Gulf reporting a decline of 2450 barrels and Louisiana Gulf a decline of 1650 barrels. These were the only declines in production reported by the major producing districts of the United States last week. Oklahoma reported a gain of 8800 barrels; California a gain of 3800 barrels; Rocky Mountain States, 1400 barrels. Other major districts reported increases ranging from 50 barrels to 800 barrels.

Oklahoma continues to be in a bad way from a supply and demand standpoint, with production consistently exceeding actual takings. Last week, the difference between actual production and indicated current market requirements amounted to more than 29,000 barrels. The accompanying table now shows that Oklahoma's indicated market outlet for crude is only about 375,000 barrels a day. With the increase of 8800 barrels in production last week, it is logical to assume that stocks continue there to show a persistent gain. Kansas is also affected by the apparent change in buying habits and is undoubtedly producing somewhat more oil than is being absorbed by the market.

California's reported increase in production last week can only be construed in an unfavorable light. That there is no justification for continuing to maintain production of that state above 500,000 barrels a day is evident from the fact that stocks are beginning to show a marked upturn. In fact, it is believed that Bureau of Mines figures for January and February of this year will reveal a decidedly unfavorable picture, with California stocks contributing principally to the increase in the industry's total stocks. There is little reason to question the specified allowable figure of 456,000 barrels a day, and indications point to a maximum current market demand of not more than 465,000 barrels a day. It is obvious, therefore, that refusal of operators to abide by the dictates of economic law will only result in further weakening the market structure. The argument that there should be a price-incentive to spur curtailment efforts is rather weak in the light of actual conditions which may force a lower market for California crude.

Vigilance of state officials in holding back production in East Texas has undoubtedly proven favorable to the industry in other areas of the United States. By reducing the well allowable of East Texas to 75 barrels a day, production of the field has again been brought down to but slightly more than 300,000 barrels a day. As a result, production of Texas is being maintained at a rate which is apparently in approximate balance with actual market requirements.

## Gasoline Stocks Up Over 2,000,000 Barrels

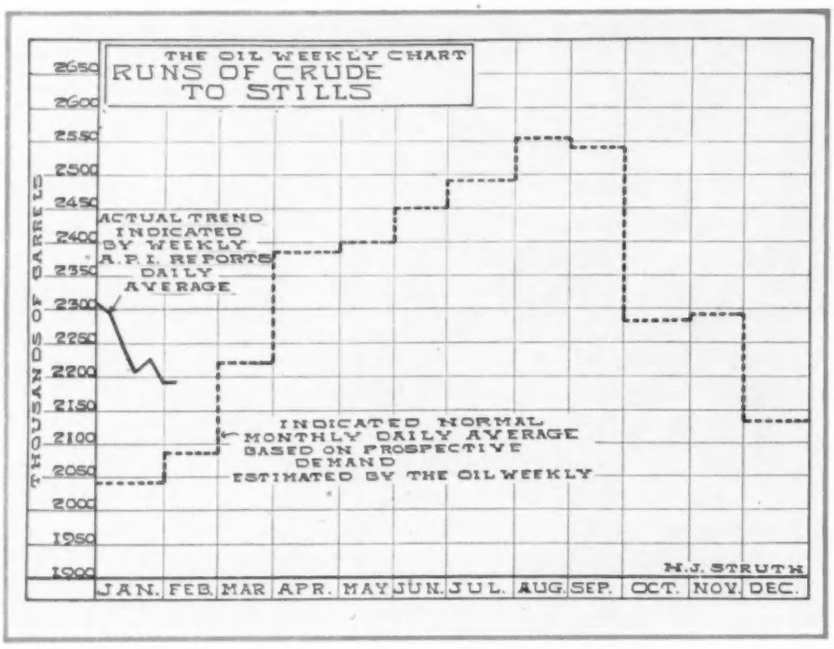
The greatest increase in gasoline stocks to occur in any one week was recorded last week. Total gasoline stocks at all refineries in the United States, based upon reports received by the American Petroleum Institute, amounted to 43,430,000 barrels, a gain over the preceding week of 2,054,000 barrels. That this was directly caused by excessive running of crude through stills is apparent from the fact that runs showed an increase last week of 53,000 barrels a day. Total crude throughput, on a Bureau of Mines basis, amounted to 2,247,000 barrels a day, as compared with an indicated economic limit for February of 2,085,000 barrels a day. Thus, the excess rate of throughput last week amounted to about 162,000 barrels a day.

A check of the status of refinery crude runs for the week ending February 6 shows that practically all districts in the United States, except the East Coast, have succeeded in curtailing operations. Compared with the situation revealed in January, all refining districts have reduced their excesses to a minimum figure, while East Coast refiners have increased their previous excess. As the situation appears now, East Coast refiners are the principal violators of economic laws, since the facts at hand show that runs in that area are about 66,000 barrels a day above normal. Texas, formerly the chief contributor to excessive refinery operations, has shown material improvement recently, having reduced excessive runs from 86,000 barrels a day to but 26,000 barrels a day. The following table gives some idea of the present status of refining operations in the United States, showing how recent actual still runs compared with indicated normal:

**Status of Refinery Operations**

(As of February 6, 1932)

| District— | Economic Limit | Actual Runs | Indicated Excess |
|---|---|---|---|
| | (Thousands of Barrels per day) | | |
| East Coast | 387 | 453 | 66 |
| Appalachian | 71 | 80 | 9 |
| Indiana-Illinois | 244 | 257 | 13 |
| Oklahoma-Kansas | 250 | 227 | —23 |
| Texas | 481 | 507 | 26 |
| Louisiana-Arkansas | 137 | 149 | 12 |
| Rocky Mountain | 47 | 39 | —8 |
| California | 462 | 471 | 9 |
| All districts | 2,079 | 2,183 | 104 |




## Drop in Export Demand Causes California Exporters Concern

After dropping steadily during 11 months, California stocks jumped slightly during December, and January total may show an increase also, although final figures are not available. The estimate of 456,700 barrels daily crude output for the state was supposed to maintain stocks without a decided change either way.

Production remains at 500,000 barrels, and nobody seems to know what to do about it. Several fields are over their allowable and the usual trouble exists. Reports tend to support the claim that curtailment is entirely effective, but in some fields various leases are far above their allowables.

The decline in offshore shipments has been worrying exporters, with Panama Canal shipments and certain Pacific foreign exports dropping steadily. The Atlantic seaboard demand has been shaky for nearly a year. Competition from East Texas and South America seems to have affected California shipments. The East Texas competition in districts formerly supplied by other sections has crowded California shipments into the background in many instances.

The Sharkey bill, a measure designed to help enforce legislation which had proved ineffective, will be voted on in California in May. Most of the larger oil companies are

## Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Report for Week Ending January 30, 1932

(Figures in Barrels of 42 gallons each)

| District— | Potential Capacity Total | Potential Capacity (Daily) Reporting | Per Cent | Crude Runs to Stills Total | Daily Average | Per c't Operated | Gasoline Stocks (see note below) | Gas & Fuel Oil Stocks |
|---|---|---|---|---|---|---|---|---|
| East Coast | 633,700 | 633,700 | 100.0 | 3,170,000 | 452,900 | 71.5 | 5,228,000 | 7,395,000 |
| Appalachian | 149,600 | 137,400 | 91.8 | 540,000 | 77,100 | 56.1 | 1,618,000 | 1,297,000 |
| Ind., Ill., Ky. | 436,300 | 431,500 | 98.9 | 1,784,000 | 254,900 | 59.1 | 5,065,000 | 4,906,000 |
| Okla., Kans., Mo. | 485,700 | 435,200 | 89.6 | 1,448,000 | 206,900 | 47.5 | 3,560,000 | 3,527,000 |
| Texas | 838,200 | 765,400 | 91.3 | 3,334,000 | 476,300 | 62.2 | 8,862,000 | 10,710,000 |
| Louisiana-Arkansas | 233,100 | 230,500 | 98.9 | 1,004,000 | 143,400 | 62.2 | 1,245,000 | 3,987,000 |
| Rocky Mountain | 160,900 | 143,800 | 89.4 | 254,000 | 36,300 | 25.2 | 1,931,000 | 726,000 |
| California | 914,500 | 888,100 | 97.1 | 3,249,000 | 464,100 | 52.3 | 13,867,000 | 96,157,000 |
| Total Feb. 6 | 3,852,000 | 3,665,600 | 95.2 | 14,783,000 | 2,111,900 | 57.6 | 41,376,000 | 128,705,000 |
| Total Jan. 30 | 3,852,000 | 3,665,600 | 95.2 | 14,774,000 | 2,110,600 | 57.6 | 40,746,000 | 129,419,000 |
| Total Feb. 7, 1931 | 3,730,100 | 3,571,200 | 95.7 | 14,976,000 | 2,139,400 | 59.9 | *41,490,000 | 130,943,000 |
| The Texas and Louisiana Gulf Coastal figures shown below are included above in the totals of their respective districts. | | | | | | | | |
| Texas Gulf Coast | 532,500 | 531,500 | 99.8 | 2,569,000 | 367,000 | 69.0 | 6,996,000 | 7,914,000 |
| La. Gulf Coast | 147,500 | 147,500 | 100.0 | 670,000 | 95,700 | 64.9 | 1,089,000 | 3,137,000 |

Note: Stocks at refineries, except in California district, which includes stocks of finished gasoline and engine distillate at refineries, water terminals and sales distributing stations and amounts in transit thereto.

* This figure is not entirely comparable with current stocks due to revisions made since original publication of this figure, for which revisions the basic information is not available by weeks. If it were possible to have made the revision, the new figure would reflect somewhat lower stocks.

## HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH ALLOWABLE QUOTAS AND CURRENT DEMAND

| State— | Allowable or Economic Limit | Indicated Current Demand | Daily Average Last Week | Added to or Withdrawn from Storage (Estimated) | Daily Average Since Jan. 1 | Indicated Excess or Shortage Since Jan. 1 (Cumulative) |
|---|---|---|---|---|---|---|
| Arkansas | 38,000[1] | 43,000 | 33,550 | — 9,450 | 34,040 | — 394,150 |
| California | 456,000[2] | 465,000 | 503,500 | +38,500 | 504,679 | +1,745,900 |
| Kansas | 90,000[1] | 92,000 | 98,850 | + 6,850 | 99,117 | + 313,150 |
| Louisiana | 54,000[1] | 63,000 | 57,000 | — 6,000 | 57,372 | — 247,600 |
| Oklahoma | 410,000[3] | 375,000 | 404,900 | +29,900 | 427,889 | — 113,550 |
| Texas | 818,000[1] | 840,000 | 837,000 | — 3,000 | 848,704 | + 383,000 |
| Balance of U. S. | 202,000[1] | 206,000 | 203,500 | — 2,500 | 205,038 | + 17,750 |
| Total | 2,068,000 | 2,084,000 | 2,138,300 | +54,300 | 2,176,839 | +1,250,200 |

[1]Economic Limit Based on Data Compiled by The Oil Weekly.
[2]Allowable set by California Proration Committee.
[3]Allowable set by Oklahoma Corporation Commission.

supporting the measure, on the theory that it will help to stabilize the industry. The opposition claims it interferes with the operation of townlot leases and intensive development.

A more drastic reduction in the state output has been urged by the umpire, who holds to the claim that a decided improvement can come only with a lower production. The state potential is far more than twice the present output, but the still sharper cut is urged to balance supply with demand.

Third grade gasoline now prevalent along the Pacific Coast has affected the demand for crude, some refiners think, making it necessary to invest as little as possible in charging stocks to realize a profit on the refined product.

---

El Dorado, Ark.—Lion Oil Refining Company recently tied into leases in the Rainbow City and El Dorado east fields to take oil formerly run by Magnolia Petroleum Company. The daily runs from the leases tied into by Lion total about 600 barrels.

## Cracked Gasoline Production

Report for Week Ending January 30, 1932

(Barrels of 42 gallons)

| | Potential Charging Capacity Daily | | | Production | |
|---|---|---|---|---|---|
| | Total | Reporting | % | Total | Daily Average |
| East Coast | 261,300 | 236,300 | 94.0 | 620,000 | 88,600 |
| Appalachian | 56,300 | 54,100 | 96.1 | 190,000 | 27,100 |
| Ind., Ill., Ky. | 330,400 | 315,400 | 95.5 | 544,000 | 77,700 |
| Okla., Kans., Mo. | 237,800 | 219,500 | 92.3 | 363,000 | 51,900 |
| Texas | 450,800 | 436,200 | 96.8 | 707,000 | 101,000 |
| Louisiana-Arkansas | 112,400 | 112,400 | 100.0 | 218,000 | 31,100 |
| Rocky Mountain | 99,900 | 98,400 | 98.5 | 79,000 | 11,300 |
| California | 190,800 | 190,800 | 100.0 | 308,000 | 44,000 |
| Total Feb. 6 | 1,739,700 | 1,663,100 | 95.6 | 3,029,000 | 432,700 |
| Total Jan. 30, 1931 | 1,739,700 | 1,663,100 | 95.6 | 2,962,000 | 423,100 |
| Total Feb. 7, 1931 | 1,589,600 | 1,504,000 | 94.6 | 2,691,000 | 384,400 |

The Texas and Louisiana Gulf Coastal figures shown below are included above in the totals of their respective districts.

| | | | | | |
|---|---|---|---|---|---|
| Texas Gulf Coast | 352,400 | 347,400 | 98.6 | 552,000 | 78,900 |
| La. Gulf Coast | 77,000 | 77,000 | 100.0 | 156,000 | 22,300 |

## Imports of Petroleum

(Barrels of 42 Gallons)

| AT ATLANTIC COAST PORTS— | Total Month Jan. | Total Month Dec. | Week Ended Feb. 6 | Week Ended Jan. 30 |
|---|---|---|---|---|
| Baltimore | 594,000 | 628,000 | 118,000 | 39,000 |
| Boston | 253,000 | 521,000 | 104,000 | [1]124,000 |
| New York | 3,226,000 | [1]3,859,000 | 598,000 | 1,056,000 |
| Philadelphia | 750,000 | 981,000 | 278,000 | 65,000 |
| Others | 1,082,000 | [1]1,057,000 | 78,000 | [1]329,000 |
| Total | 5,905,000 | 7,046,000 | 1,176,000 | 1,613,000 |
| Daily Average | 190,484 | 227,290 | 168,000 | 230,429 |
| AT GULF COAST PORTS— | | | | |
| Galveston District | 151,000 | 61,000 | ..... | ..... |
| New Orleans & Baton Rouge | 224,000 | [1]131,000 | ..... | ..... |
| Port Arthur & Sabine District | 65,000 | ..... | ..... | ..... |
| Tampa | 46,000 | ..... | ..... | ..... |
| Total | 486,000 | 192,000 | ..... | ..... |
| Daily Average | 15,677 | 6,194 | ..... | ..... |
| AT ALL UNITED STATES PORTS— | | | | |
| Total | 6,391,000 | 7,238,000 | 1,176,000 | 1,613,000 |
| Daily Average | 206,161 | 233,484 | 168,000 | 230,429 |
| Distribution of Total Imports Is As Follows: | | | | |
| Crude | 3,099,000 | [1]4,244,000 | 730,000 | 959,000 |
| Gasoline | 1,187,000 | [1]794,000 | 173,000 | [1]165,000 |
| Gas Oil | 107,000 | [1]164,000 | ..... | 2,000 |
| Fuel Oil | 1,998,000 | 2,036,000 | 273,000 | [1]487,000 |
| Total | 6,391,000 | 7,238,000 | 1,176,000 | 1,613,000 |

## California Oil Receipts

(Barrels of 42 Gallons)

| AT ATLANTIC COAST PORTS— | Total Month Jan. | Total Month Dec. | Week Ended Feb. 6 | Week Ended Jan. 30 |
|---|---|---|---|---|
| Baltimore | 120,000 | 98,000 | ..... | ..... |
| Boston | 53,000 | ..... | ..... | [1]53,000 |
| New York | 449,000 | 697,000 | ..... | ..... |
| Philadelphia | 117,000 | 274,000 | ..... | ..... |
| Others | 177,000 | [1]267,000 | 25,000 | 120,000 |
| Total | 916,000 | 1,336,000 | 25,000 | 173,000 |
| Daily Average | 29,548 | 43,097 | 3,571 | 24,714 |
| AT GULF COAST PORTS— | | | | |
| Total | ..... | 160,000 | ..... | ..... |
| Daily Average | ..... | 5,161 | ..... | ..... |
| AT ATLANTIC AND GULF COAST PORTS— | | | | |
| Total | 916,000 | 1,496,000 | 25,000 | 173,000 |
| Daily Average | 29,548 | 48,258 | 3,571 | 24,714 |
| Distribution of Total California Oil Receipts is as follows: | | | | |
| AT ATLANTIC COAST PORTS— | | | | |
| Gasoline | 813,000 | [1]1,241,000 | 25,000 | [1]173,000 |
| Gas Oil | 95,000 | ..... | ..... | ..... |
| Fuel Oil | ..... | 95,000 | ..... | ..... |
| Lubricants | 8,000 | ..... | ..... | ..... |
| Total | 916,000 | 1,336,000 | 25,000 | 173,000 |
| AT GULF COAST PORTS— | | | | |
| Gasoline | ..... | [1]160,000 | ..... | ..... |
| Total | ..... | 160,000 | ..... | ..... |

[1] Revised.

## United States Daily Average Production

| 1930 | Oklahoma | Kansas | Texas (Outside Gulf Coast) | Gulf Coast | North Louisiana | Arkansas | Eastern States | Rocky Mountain | California | United States Daily Av. | United States Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| August | 558,850 | 115,650 | 646,400 | 206,600 | 41,500 | 55,100 | 128,550 | 106,000 | 611,250 | 2,470,900 | 76,597,600 |
| September | 558,900 | 116,550 | 606,550 | 200,750 | 40,150 | 53,550 | 121,400 | 110,650 | 604,900 | 2,413,400 | 72,402,205 |
| October | 542,100 | 114,850 | 609,500 | 194,850 | 41,500 | 52,800 | 121,750 | 104,000 | 590,800 | 2,372,150 | 73,536,350 |
| November | 491,550 | 111,400 | 579,350 | 190,100 | 44,050 | 52,000 | 116,400 | 101,950 | 601,200 | 2,288,000 | 68,639,150 |
| December | 459,300 | 105,550 | 533,400 | 189,300 | 43,000 | 51,100 | 112,200 | 100,500 | 587,450 | 2,181,800 | 67,636,500 |
| 1931 | | | | | | | | | | | |
| January | 452,000 | 106,350 | 511,050 | 188,850 | 41,100 | 50,700 | 110,300 | 96,700 | 535,700 | 2,092,750 | 64,874,450 |
| February | 473,750 | 114,450 | 523,700 | 185,600 | 43,950 | 49,950 | 109,800 | 100,100 | 527,300 | 2,128,600 | 59,600,450 |
| March | 531,900 | 110,550 | 585,000 | 177,950 | 40,250 | 47,550 | 108,800 | 95,400 | 528,100 | 2,225,500 | 68,990,850 |
| April | 543,650 | 109,250 | 723,050 | 185,850 | 39,050 | 47,000 | 111,500 | 95,500 | 527,350 | 3,382,200 | 71,465,750 |
| May | 561,950 | 107,400 | 767,200 | 185,950 | 39,200 | 46,650 | 111,250 | 97,500 | 534,150 | 2,451,250 | 75,975,950 |
| June | 556,850 | 103,150 | 828,250 | 170,100 | 36,500 | 44,900 | 108,950 | 97,950 | 520,300 | 2,466,950 | 74,009,750 |
| July | 527,950 | 100,000 | 912,250 | 157,850 | 33,650 | 41,400 | 107,600 | 94,400 | 517,900 | 2,493,000 | 77,282,700 |
| August | 306,150 | 101,900 | 976,800 | 153,550 | 30,400 | 37,650 | 109,600 | 92,900 | 510,900 | 2,319,050 | 71,890,200 |
| September | 261,050 | 104,600 | 752,250 | 149,950 | 29,600 | 38,000 | 117,400 | 92,250 | 505,550 | 2,050,650 | 61,518,950 |
| October | 423,600 | 103,950 | 865,800 | 153,500 | 29,200 | 37,750 | 121,600 | 93,950 | 503,800 | 2,333,150 | 72,327,750 |
| November | 541,250 | 104,750 | 855,550 | 158,850 | 29,300 | 37,650 | 124,300 | 93,950 | 503,050 | 2,448,650 | 73,460,150 |
| December | 534,650 | 105,500 | 795,500 | 153,550 | 27,850 | 35,100 | 124,500 | 92,150 | 503,000 | 2,371,800 | 72,525,700 |
| January | 439,250 | 99,400 | 735,450 | 141,050 | 28,850 | 34,250 | 123,050 | 82,800 | 505,900 | 2,190,000 | 67,890,550 |
| Feb. 6 | 396,100 | 98,050 | 750,950 | 144,300 | 28,350 | 33,500 | 120,350 | 81,400 | 499,700 | 2,152,700 | 15,068,900 |
| February 13 | 404,900 | 98,850 | 725,100 | 140,200 | 28,700 | 33,550 | 120,900 | 82,600 | 503,500 | 2,138,300 | 14,968,100 |
| Increase | 8,800 | 800 | ..... | ..... | 350 | 50 | 550 | 1,400 | 3,800 | ..... | ..... |
| Decrease | ..... | ..... | 25,850 | 4,100 | ..... | ..... | ..... | ..... | ..... | 14,400 | 100,800 |

## Last Week's Daily Average Production by Districts

| TEXAS | For Week Ending Feb. 13 | Previous Week |
|---|---|---|
| Panhandle | 48,800 | 50,350 |
| North Texas | 48,400 | 48,350 |
| West Central Texas | 23,950 | 25,300 |
| West Texas | 173,250 | 176,100 |
| East Central Texas | 50,300 | 49,600 |
| East Texas | 327,500 | 349,250 |
| Southwest Texas | 52,900 | 51,400 |
| Texas Gulf Coast | 111,900 | 114,350 |
| TOTAL TEXAS | 837,000 | 865,300 |
| OKLAHOMA | 404,900 | 396,100 |
| CALIFORNIA | 503,500 | 499,700 |
| KANSAS | 98,850 | 98,050 |

*Includes Michigan.

| LOUISIANA | For Week Ending Feb. 13 | Previous Week |
|---|---|---|
| North Louisiana | 28,700 | 28,350 |
| Louisiana Gulf Coast | 28,300 | 29,950 |
| TOTAL LOUISIANA | 57,000 | 58,300 |
| ARKANSAS | 33,550 | 33,500 |
| MOUNTAIN STATES | | |
| Wyoming | 34,350 | 34,900 |
| Montana | 7,050 | 7,300 |
| Colorado | 3,600 | 3,650 |
| New Mexico | 37,600 | 35,550 |
| TOTAL MOUNTAIN STATE | 82,600 | 81,400 |
| *EASTERN STATES | 120,900 | 120,350 |
| TOTAL UNITED STATES | 2,138,300 | 2,152,700 |

## Summarized Review of Field Results

| State— | Completions This week | Completions Last week | Oil Wells This week | Oil Wells Last week | Gas Wells This week | Gas Wells Last week | Failures This week | Failures Last week | Initial Prod. This week | Initial Prod. Last week |
|---|---|---|---|---|---|---|---|---|---|---|
| Arkansas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| California | 4 | 7 | 4 | 6 | 0 | 0 | 0 | 1 | 2,550 | 1,760 |
| Illinois | 1 | 5 | 0 | 2 | 0 | 1 | 1 | 2 | 0 | 3 |
| Indiana | 1 | 5 | 0 | 0 | 1 | 4 | 0 | 1 | 0 | 0 |
| Kansas | 12 | 12 | 8 | 8 | 0 | 1 | 4 | 3 | 12,380 | 2,385 |
| Kentucky | 13 | 9 | 12 | 5 | 0 | 0 | 1 | 4 | 985 | 37 |
| Louisiana | 3 | 7 | 2 | 3 | 0 | 0 | 1 | 4 | 1,875 | 1,498 |
| Michigan | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1,000 |
| Mississippi | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| New Mexico | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 14,750 | 0 |
| New York | 11 | 4 | 10 | 0 | 1 | 4 | 0 | 0 | 125 | 0 |
| Ohio | 13 | 19 | 0 | 8 | 8 | 9 | 5 | 2 | 0 | 126 |
| Oklahoma | 15 | 13 | 9 | 9 | 2 | 2 | 4 | 2 | 18,435 | 16,620 |
| Pennsylvania | 26 | 3 | 19 | 0 | 6 | 1 | 1 | 2 | 86 | 0 |
| Texas | 117 | 123 | 93 | 98 | 3 | 6 | 21 | 19 | 707,099 | 655,320 |
| West Virginia | 14 | 4 | 1 | 0 | 9 | 2 | 4 | 2 | 33 | 0 |
| Totals | 231 | 214 | 159 | 140 | 30 | 31 | 42 | 43 | 758,318 | 678,749 |
| Increase | | 17 | | 19 | .... | | .... | | | 79,569 |
| Decrease | .. | .. | .. | .. | | 1 | | 1 | ..... | ..... |

## Comparison of Permits Granted for New Wells

| | For Week Ending Feb 13 | Previous Week | This Week 1931 | Total This Month | This Month 1931 | Total This Year | Total This Date Last Year | 1931 Year Total |
|---|---|---|---|---|---|---|---|---|
| Arkansas | 0 | 0 | 0 | 0 | 8 | 1 | 8 | 34 |
| California | 3 | 6 | 5 | 9 | 27 | 29 | 40 | 342 |
| Louisiana | 3 | 8 | 10 | 11 | 23 | 52 | 54 | 309 |
| Kansas | 6 | 6 | 10 | 12 | 49 | 57 | 78 | 475 |
| Oklahoma | 15 | 9 | 13 | 24 | 85 | 90 | 157 | 842 |
| Texas | 164 | 144 | 71 | 308 | 233 | 716 | 533 | 6,961 |
| Totals | 191 | 173 | 109 | 365 | 425 | 945 | 870 | 8,963 |

## Dissenters on Sunday Shut-Down Add East Texas "Distress" Crude

Kilgore, Texas.—Ranks of the East Texas operators that favor the production holiday on Sunday are gradually thinning with a corresponding gain in the supply of distressed price crude. Production figures compiled at military headquarters here credit 1115 wells out of a total of 4160 completions as being operated February 14, with 170 of the total unaccounted for, making actual production in the neighborhood of 90,000 barrels daily.

A large percentage of this production is banned by the regular crude purchasers, thus leaving the well owners to deal with independent interests seeking oil at less than posted price to furnish the market.

### Offsets Operated

Some of the major companies are now listed as regular producers on Sunday of a portion of their wells, all of them produced on Sunday being offsets to wells that have ignored the Sunday shut-down plan. Arkansas Fuel Oil Company has been the most conspicuous in the major group, which also includes The Texas Company, Houston Oil Company, and Shell Petroleum Corporation. The latter opened three wells last Sunday after having heretofore been 100 per cent idle on the holiday, but these were offsets to wells that produce each Sunday.

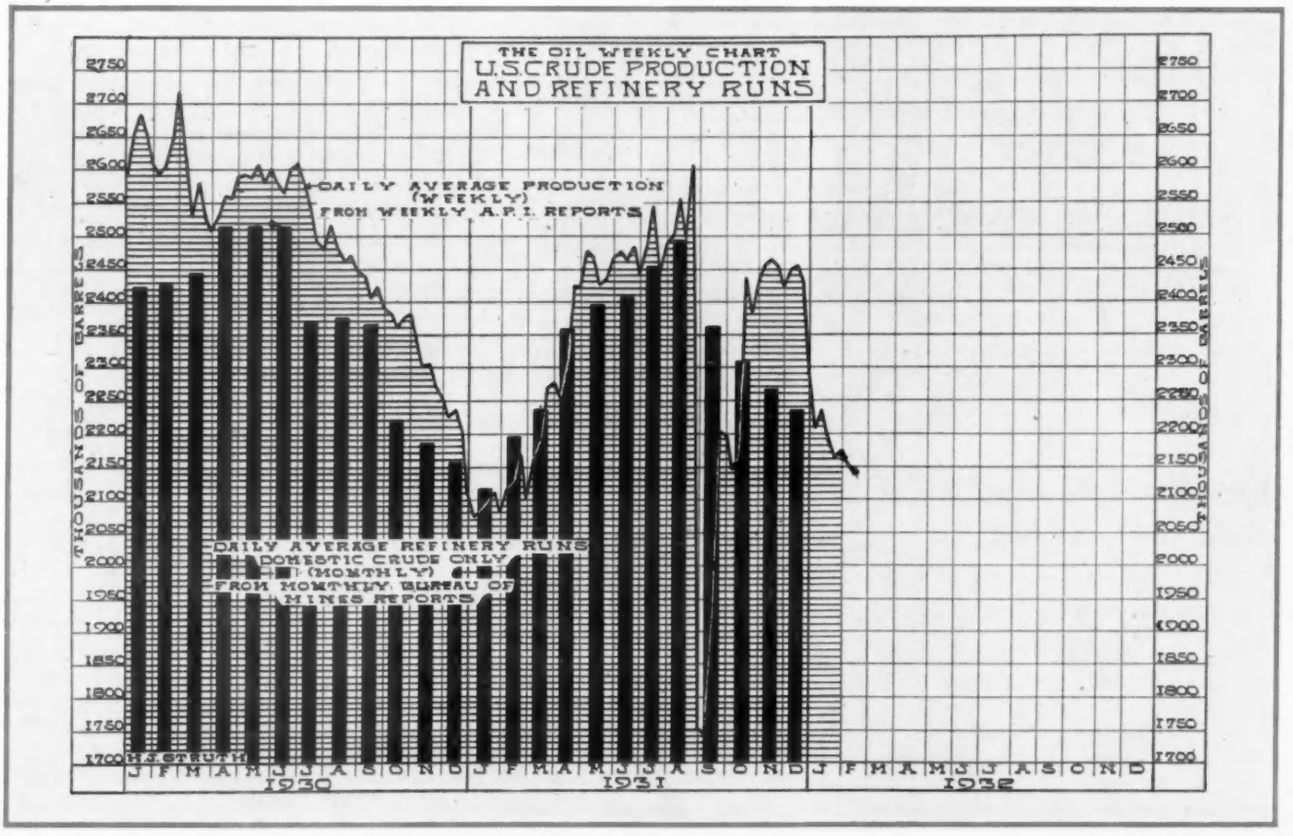
A survey of the well connection situation in the East Texas field revealed 17 wells awaiting pipe line relief last week, and the bulk of these are located east of the railroad in the Kilgore area, or in the west edge of the Joiner area, Smith County. Both areas being isolated from pipe lines of companies that usually lend a hand to those in need of market aid.

Placing militiamen, who work in eight-hour shifts, at each of the refineries operating in the East Texas field has helped materially to tighten proration restrictions. Military authorities report that the only important leak remaining to be dealt with is where operators produce their fuel oil requirements in connection with new drilling and lease operations, as well as produce and sell the allowable production from a well. The major pipe line companies are not being placed entirely on their honor to observe proration, and the troopers are checking their records and activities at regular intervals. Local refiners accepted the presence of the troops as a matter of military rights, and are cooperating. The hourly tank gauges supposed to be taken by the soldiers on duty at these plants are intended to detect the arrival of any unaccounted for production accepted by the plant owner.

## Oklahoma City Allowable Cut

Daily average production for Oklahoma for the week ending Saturday, February 13, was 404,350 barrels, an increase of 8865 barrels, which was accounted for by increases of 7000 barrels in the general Seminole district and 3260 barrels in the Oklahoma City pool. During the same period daily average production in Kansas went from 97,740 barrels to 98,565 barrels due to an increase of 1870 barrels in the Ritz-Decker-Garrett area and a drop of 1100 barrels in Voshell.

Under an emergency order issued on Saturday, February


THE OIL WEEKLY CHART
U.S. CRUDE PRODUCTION AND REFINERY RUNS
DAILY AVERAGE PRODUCTION (WEEKLY) FROM WEEKLY A.P.I. REPORTS
DAILY AVERAGE REFINERY RUNS DOMESTIC CRUDE ONLY (MONTHLY) FROM MONTHLY BUREAU OF MINES REPORTS
THOUSANDS OF BARRELS
H.C. STRUTH
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1930
1931
1932

13, by the Oklahoma Corporation Commission, allowable production in the Oklahoma City pool for the remainder of the month was reduced from 95,000 to 94,000 barrels daily, based on a nomination of approximately 88,000 barrels. Inclination of operators in that pool during the past few weeks has been to produce from 15,000 to 25,000 barrels less than the daily allowable and production for the coming week is not expected to exceed 85,000 barrels daily.

Net oil to storage in Kansas and Oklahoma dropped from 22,700 barrels during the week ending February 6, to 4,900 barrels net to storage during the past week, despite the upward movement of daily production in the two states and no appreciable increase in crude runs to stills.

Mid-Continent refiners reported a slightly improved condition at the end of the week although prices were low and buying was about typical of the past few weeks.

## Magnolia Accumulates Crude Stocks for Vacuum Refineries

Dallas, Texas.—Additions were made to crude stocks held by Magnolia Petroleum Company in Oklahoma at average daily rate of 22,399 barrels during January, making a total of 694,383 barrels accumulation for the month. This heavy piling up of stocks in Oklahoma has been under way for several months as a preliminary step toward the filling of all future crude requirements of the group of Midwestern refineries now controlled by Vacuum Oil Company, which is in turn affiliated with Magnolia Petroleum Company through both being controlled by the Socony-Vacuum Corporation. Initial movement of crude from Magnolia Petroleum Company's Oklahoma tanks to the above refining group was scheduled to get under way February 16, with Prairie Pipe Line Company moving the oil north. At the close of January Magnolia Petroleum Company was credited with 8,474,950 barrels of crude oil in Oklahoma tankage.

### Purchases Decrease

Crude production and purchases by Magnolia Petroleum Company in Oklahoma and Texas decreased during January, as compared to the previous month. A daily average of 40,211 barrels was maintained during December in Oklahoma, but this was cut to a daily average of 36,346 barrels the past month. Crude takings from fields in Texas averaged 80,149 barrels daily in January, or 14,269 barrels less than the daily average maintained during December. This loss was largely accounted for by reason of the fact that runs from the East Texas field dropped from 56,262 barrels daily average in December to 47,241 barrels daily average in January.

## Canadian Refinery To Resume Operation

Coutts, Alta.—It is reported here that Maple Leaf Refining Company will resume operations at its plant here some time in the near future. The company and refinery were recently purchased by interests represented by John Akolt, a Denver lawyer, but no announcement concerning the principals involved was made. If the refinery does resume work, it will provide another outlet for the production from the Red Coulee, or Border field, which lies partly in Alberta and partly in Wyoming. One well is now being completed in the field, but no others are under way.

## Reeser Report on California Situation Filed With Governor

Los Angeles.—E. B. Reeser, president of Barnsdall Oil Corporation and formerly president of the American Petroleum Institute, who was named recently by Governor James Rolph to make a survey of the petroleum industry in California, has laid his report before the governor. The survey touches on various phases of the industry and offers suggestions as to possible means of recovering from the present slump.

Reeser urges the adoption of the Sharkey Bill as the only tangible hope available to stop the drift towards disintegration of capital investment of companies operating exclusively in the older producing fields of the state. This bill will be voted on in May and directs the oil conservation commission in allocating oil production among the different fields and the different zones, properties and wells in the different fields so as to avoid discrimination.

The problem of receiverships was discussed and it was shown that 51 oil companies are under receivership at this time. In their eagerness to make ends meet, these companies produced more oil than allowed under the present curtailment set-up, it is shown. It was further stated that most of these companies are hopelessly insolvent and have sold production for as low as eight cents per barrel. Many companies have been added to the list of insolvents.

Gasoline taxes came in for considerable discussion in the report. The delinquent gasoline tax on January 1 was more than $2,000,000 in California alone. It was further shown that there is a strong tendency to evade gasoline taxes, and that the evasion of gasoline taxes has become a national disgrace.

The over-expansion of filling stations throughout the state is most regrettable, Reeser states, and the policy of several companies and individuals has apparently disregarded sound business judgment and brought about justified adverse criticism. It is suggested that a law be enacted requiring a license to build additional stations and that such license be not granted except where it is shown to be a public necessity.

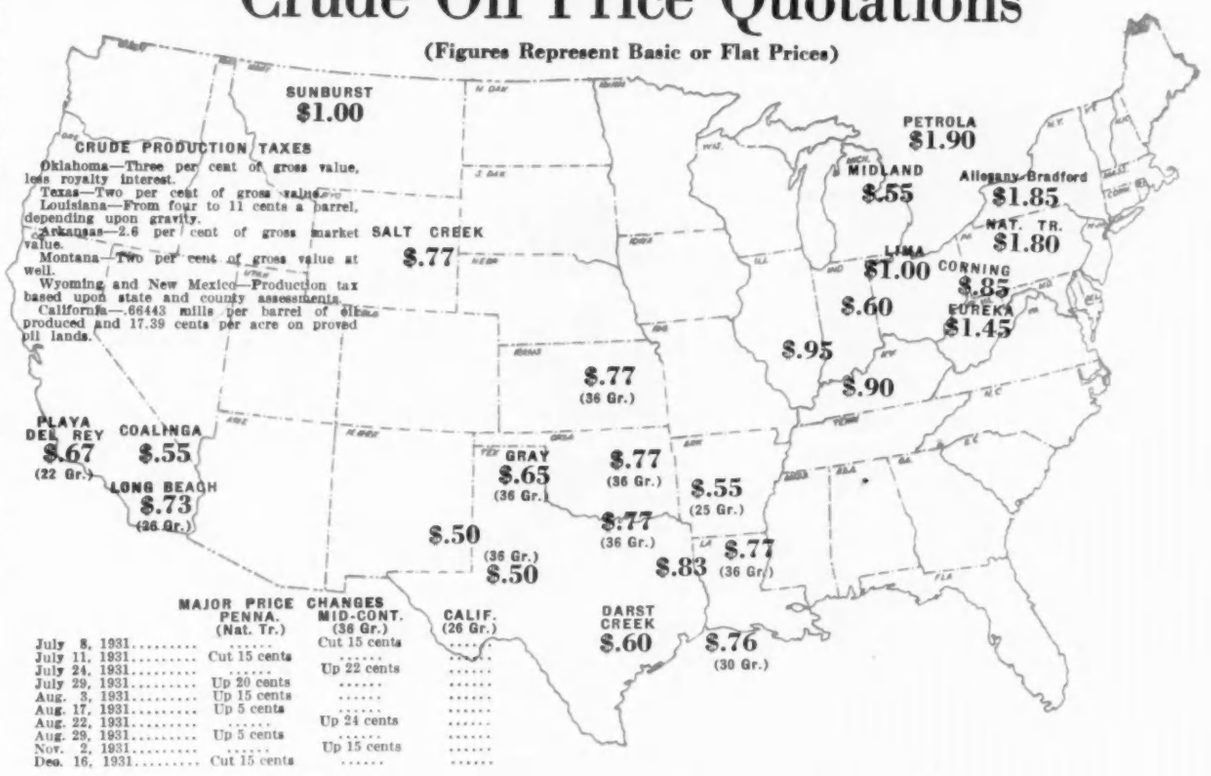
The relation between crude production and refined marketing has become so close that the retail outlet must be considered when discussing the industry as a unit.

## Severe Competition From Russia and Roumania

The oil industry's foreign trade has been subjected to severe competition from Russia and Roumania during 1931. Accompanying the sharp decline in the American oil industry's export business, has been a brisk increase in the export business done by Russia and Roumania. In fact, exports of gasoline from the United States to three principal European countries, England, France and Germany, showed a slump of nearly 7,000,000 barrels, combined, during the first 10 months of last year, while receipts of these countries from other sources increased to that extent. This volume of gasoline from the United States was displaced approximately as follows: Russia, 2,030,928 barrels; Roumania, 2,714,329 barrels; Persia, 1,226,045 barrels; Dutch West Indies, about 1,000,000 barrels.

# Crude Oil Price Quotations

**(Figures Represent Basic or Flat Prices)**




**MAJOR PRICE CHANGES**

| | PENNA. (Nat. Tr.) | MID-CONT. (36 Gr.) | CALIF. (26 Gr.) |
|---|---|---|---|
| July 8, 1931 | ..... | Cut 15 cents | ..... |
| July 11, 1931 | Cut 15 cents | ..... | ..... |
| July 24, 1931 | ..... | Up 22 cents | ..... |
| July 29, 1931 | Up 20 cents | ..... | ..... |
| Aug. 3, 1931 | Up 15 cents | ..... | ..... |
| Aug. 17, 1931 | Up 5 cents | ..... | ..... |
| Aug. 22, 1931 | ..... | Up 24 cents | ..... |
| Aug. 29, 1931 | Up 5 cents | ..... | ..... |
| Nov. 2, 1931 | ..... | Up 15 cents | ..... |
| Dec. 16, 1931 | Cut 15 cents | ..... | ..... |

## Official Postings and Differentials

***(Revised to February 16, 1932)***

**California:** (Effective June 19, 1931.)

**Signal Hill, Seal Beach and Alamitos Heights:** 14 to 22.9 gravity 65 cents; 23 gravity 67 cents with differential to two cents for each degree upward. Top price for Signal Hill, 30 gravity, 81 cents; top price Seal Beach and Alamitos Heights, 27 gravity, 75 cents.

**Huntington Beach:** 14 to 21 gravity, 65 cents; 22 gravity, 66 cents with differential of two cents for each degree upward. Top price, 27 gravity, 76 cents.

**Inglewood:** 14 to 19.9 gravity 65 cents; 20 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity 76 cents.

**Playa Del Rey:** 19 to 20.9 gravity 65 cents with differential of one cent for each degree upward. Top price, 25 gravity, 70 cents.

**Olinda and Brea Canyon:** 14 to 19.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents; 22 gravity 68 cents with differential of two cents for each degree upward. Top price, 28 gravity, 80 cents.

**Coyote Hills:** 14 to 22.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents with differential of two cents for each degree upward. Top price, 28 gravity, 79 cents.

**Santa Fe Springs:** 24 to 26.9 gravity 65 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 73 cents; 30 gravity 75 cents; 31 gravity 78 cents; 32 gravity 80 cents; 33 gravity 83 cents; 34 gravity 85 cents; 35 gravity and above 87 cents.

**Whittier, La Habra and Montebello:** 65 cents a barrel.

**Torrance:** 14 to 21.9 gravity 65 cents with differential of one cent for each degree to 25 gravity and two-cent differential for 25 gravity. Top price, 25 gravity, 70 cents.

**Richfield:** 14 to 20.9 gravity 65 cents; 21 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 74 cents.

**Elwood:** 33 gravity 79 cents; 34 gravity 81 cents with differential of three cents for each degree upward. Top price, 36 gravity, 87 cents.

**Newhall, McKittrick and Kern River:** 55 cents a barrel.

**Midway-Sunset, Elk Hills and Buena Vista Hills:** 14 to 21.9 gravity 55 cents; 22 gravity 56 cents; 23 gravity 58 cents; 24 gravity 61 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 74 cents; 30 gravity 76 cents.

**Lost Hills:** 14 to 20.9 gravity 55 cents; 21 gravity 57 cents; 22 gravity 59 cents; 23 gravity 60 cents; 24 gravity 62 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 67 cents; 28 gravity 69 cents; 29 gravity 71 cents; 30 gravity 72 cents.

**Coalinga:** 14 to 24.9 gravity 55 cents; 25 gravity 57 cents.

**Wheeler Ridge:** 55 cents a barrel.

**Athens, Dominguez and Rosecrans:** 24 to 24.9 gravity 69 cents with differential of two cents for each degree upward. Top price, 34 gravity, 89 cents a barrel.

**Oklahoma, Kansas, North Texas** (Effective January 8, 1932).

Below 29 gravity; 61 cents, with differential of 2 cents for each degree to 40 gravity and above which is posted at 85 cents.

**Texas Panhandle:** (Effective November 2, 1931)

**Gray County:** Below 35 gravity: 61 cents, with differential of 2 cents for each degree to 40 gravity and above which is posted at 73 cents.

**Carson and Hutchinson Counties:** Below 35 gravity; 56 cents with differential of 2 cents for each degree to 40 gravity and above which is posted at 68 cents.

**West Texas:** (Effective November 2, 1931).

**Crane-Upton, Crockett, Ector, Howard-Glasscock, Pecos and Winkler Counties, Texas and Lea County, New Mexico:** 50 cents a barrel.

**Southwest Texas:** (Effective November 2, 1931)

**Refugio:** Heavy: 75 cents.

**Refugio:** Light: (Same as Gulf Coast—see below).

**Gulf Coast:** (Effective November 2, 1931)

**Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light:** Below 25 gravity: 70 cents, with differential of 1 cent for each degree to 40 and above which is posted at 86 cents.

**Mirando:** 75 cents; **Salt Flat:** 60 cents; **Darst Creek:** 60 cents; **Pettus:** 85 cents; **Markham:** 67 cents.

**East Texas** (Effective November 2, 1931)

**Flat Price** 83 cents.

**North Louisiana and Arkansas:** (Effective Nov. 4, 1931)

**Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville:** Below 25 gravity 53 cents with differential of 2 cents for each degree beginning with 25 gravity and ending with 40 and above. Top price 85 cents a barrel.

**Smackover:** 55 cents.

**Rocky Mountain States:** (Effective Nov. 3, 1931)

**Salt Creek:** Below 29 gravity 61 cents; 29-29.9 gravity 63 cents, with differential of 2 cents each degree to 40 and above. Top price 85 cents.

**Elk Basin and Grass Creek:** $1.05; **Big Muddy:** 83 cents; **Lance Lance Creek** $1.05; **Rock Creek:** 85 cents; **Sunburst:** $1.00; **Osage:** 98 cents; **Cat Creek:** $1.05 cents; **Pondera:** 90 cents; **Hogback, New Mexico:** 80 cents.

**Eastern States:** (Effective November 3, 1931)

**Lima:** $1.00; **Indiana:** 60 cents; **Illinois:** 95 cents; **Princeton** 95 cents; **Wooster:** $1.15; **Western Kentucky:** 90 cents.

**Pennsylvania:** (Effective December 16, 1931)

**Bradford District:** $1.85; **National Transit Oil:** $1.80; **Southwest Pennsylvania Pipe Line Oil:** $1.55; **Eureka Pipe Line Oil:** $1.45; **Buckeye Pipe Line Oil:** $1.25; **Corning Crude:** 80 cents.

**Michigan:** (Effective Oct. 9, 1931). **Midland:** 55 cents a barrel. **Muskegon:** Same posting as Mid-Continent; 61 cents to 85 cents a barrel.

**Canada:** (Effective Nov. 3, 1931).

**Petrolia:** $1.90; **Oil Springs:** $1.97.

GULF

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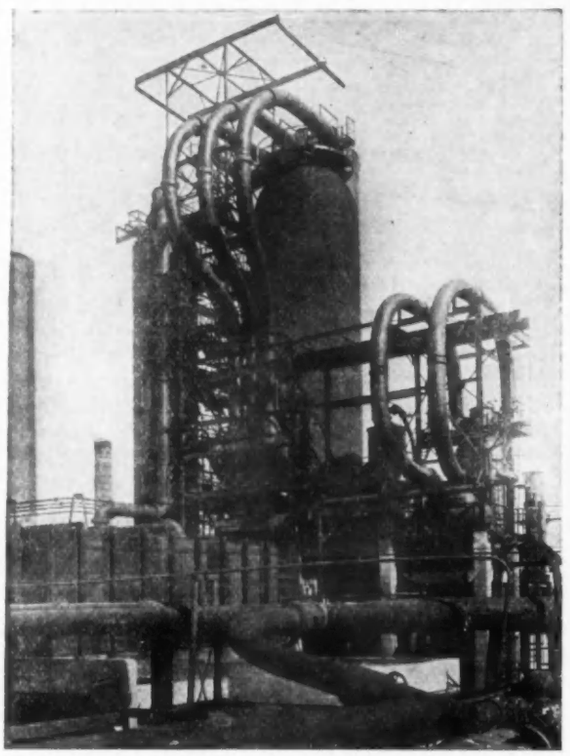

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## Engineers Gather in New York to Talk Economics and Stabilization

New York.—The annual meeting of the American Institute of Mining and Metallurgical Engineers was opened in New York on Monday with an attendance of approximately 1500, which was expected to be increased materially when the oil contingent arrived on Wednesday to hear papers devoted to review of production operations, domestic and foreign, and to the discussion of petroleum economics and petroleum stabilization.

Discussions on geophysical prospecting, which began on Monday, were well attended and were regarded as marking an important milestone in the progress of the oil industry's newest science.

The interest of the petroleum division is centered on an informal talk by Amos L. Beaty, president of the American Petroleum Institute, which will be one of the concluding features of Thursday evening and which is expected to be full of homely truths.

## Panhandle Engineers Form A. P. I. Production Division

Pampa, Texas. — Field superintendents and petroleum engineers representing all oil and gas areas in the Texas Panhandle met here February ninth and organized the Panhandle Chapter of the American Petroleum Institute's Division of Production. This new chapter will be attached to the Mid-Continent district because of its geographical relationship, although all other chapters in Texas are in the so-called Southwestern District.

J. Ed. Warren, Borger, superintendent for Continental Oil Company, was elected chairman of the Panhandle chapter, and other officers included: Ed. W. Bisett, division superintendent for Skelly Oil Company, and Hugh F. Allspaugh, Amarillo, general manager Dixon Creek Oil & Refining Company, vice-chairmen, and H. E. Rogers, Borger, Phillips Petroleum Company, secretary-treasurer. Wm. E Hubbard, Pampa, division superintendent Humble Oil & Refining Company, was appointed chairman of the program committee.

W. J. Crites of Phillips Petroleum Company is secretary of the Mid-Continent district body, and made a short talk. H. N. Blakeslee, Dallas, safety engineer, American Petroleum Institute, also addressed the group.

## East Texas Line Connection Cost Assuming Large Figure

Tyler, Texas.—Equipment and labor investment of the various pipe line companies engaged in the gathering of crude in the East Texas field is soaring to an almost unbelievable sum as result of the operators continuing to complete an average of about 10 new wells daily. Pipe line companies estimate that the average new connection involves laying of 1000 feet of pipe, and that each new well connection or tank battery taken on costs approximately $1000 for equipment and labor. Many wells cost considerably more to connect when individual steam or motor driven pumps must be installed to boost the oil into the main field gathering unit. Gravity units have been substituted by pressure lines since cold and wet weather put in its appearance, otherwise many well owners would not be relieved of stocks as often as needed.

Calculated on a basis of $1000 per well, the various pipe line companies have invested in excess of $4,000,000 for equipment and labor in connecting to the 4150 producers. However, the salvage value of this equipment in later years will undoubtedly be great, as the corrosion problems are almost nil in this field.

Some of the large crude purchasers in the field have lately forced outside connections to bear the cost of equipment and labor in serving new wells. Well connections are in greater demand since the cut in the allowable production, and it is not expected that the above policy will become widespread.

## Oklahoma City Purchasers Require Less Production

Oklahoma City.—Allowable production for the Oklahoma City pool received its "semi-monthly" reduction when the Corporation Commission issued an emergency order on Saturday, February 13, reducing that figure from 95,000 to 94,000 barrels daily. This action came as a result of the hearing held Thursday, February 11, when purchasers nominated a daily taking of 88,010 barrels for the period February 16 to 29 inclusive. Adjustment will be made by reducing daily allowable for Arbuckle limestone wells from 6000 to 5000 barrels, all other allocations remaining the same as under the preceding order.

One of the factors which probably influenced the commission in reducing allowable only 1000 barrels daily was Empire Pipe Line Company's nomination, in which it stated that it would take 15,000 barrels daily if the preceeding order was allowed to stand. No statement was made regarding action in the event the existing order was revised. Ray Collins, state proration umpire and pipe line umpire for the Oklahoma City pool, spent most of the past week in conference with producers and purchasers but has made no definite announcement regarding progress of his plan for securing connections for all producing wells. Action of Sinclair-Texas Pipe Line Company in reducing runs from better than 50,000 barrels daily to less than 5000 barrels left about 30 wells with no connections. Provisions of the conservation act plus a willingness of purchasers to cooperate should enable Collins to complete arrangements within the next few days. General conditions indicate that no further reductions will be made in Oklahoma City allowable and it is likely that the commission will make a concerted effort to increase that figure through adjustment as between Oklahoma City and the Seminole district.

## Rincon Ocean Test Failure At 7,000 Feet; Plug Back

Ventura, Calif.—General Petroleum Corporation will not drill farther in Needham 55-2, an ocean test in the Rincon field, and will plug back from 7335 feet to test the upper zone around 3000 feet. This well flowed at a 900-barrel rate from the shallower depth, and was killed for deepening after showing a small decline. A hard gray shale was cored below 7000 feet, and the formation did not offer promise of something better. The mainland leases at Rincon yielded only small producers at shallow depths, and the field was not a profitable venture. A few wells were drilled outside the tide line, but none was an outstanding producer. The ocean leases have proved better than the inside tracts, but the cost of development has been correspondingly greater. One of the longest piers ever built was constructed to drill three tideland wells.

# Formations Simplify Drilling And Casing at Tioga

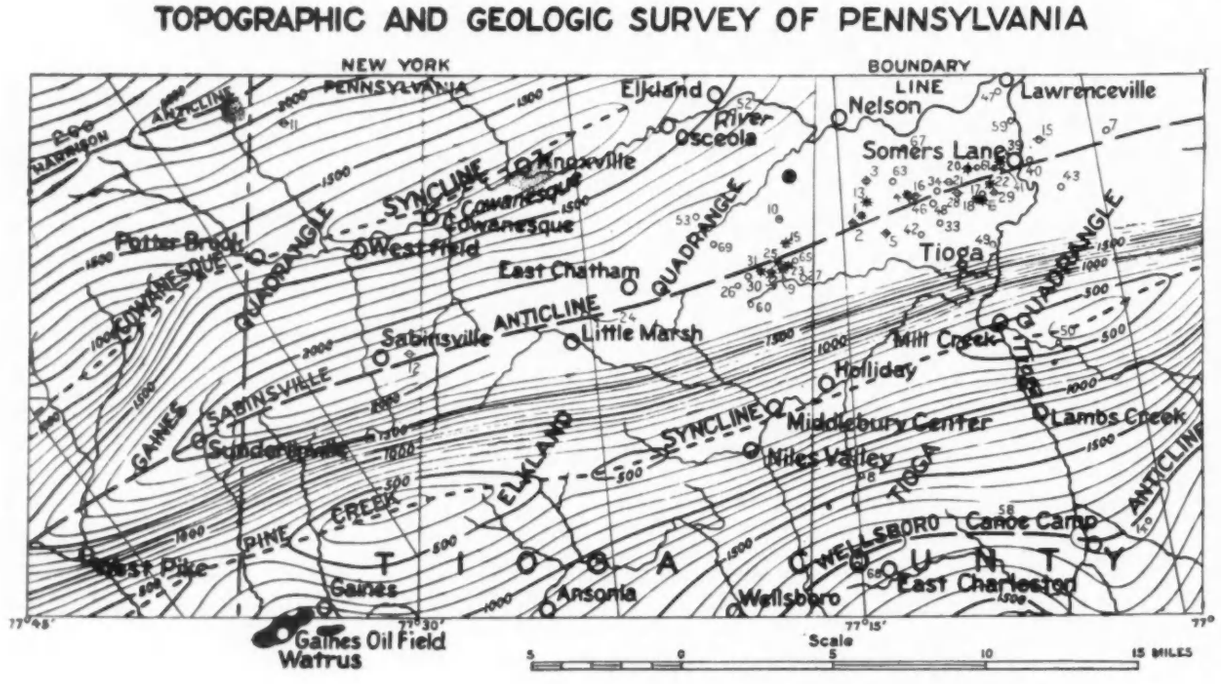
By ROY E. LEIGH
*Associate Editor*

DRILLING in the Tioga field of northern Pennsylvania is solely by cable tools. Formations of the area are such that they offer an excellent working condition for the type of drilling that had its birth in Pennsylvania. Steam, gas and gasoline are being used for power.

The only water sand of any importance is found at about 300 feet. Common practice is to set 100 to 200 feet of surface casing, and 700 to 900 feet of eight-inch as a water string. The holes are practically dry below the eight-inch, and the formations stand up well. A six-inch production string is set in a lime rock immediately above the pay sand. The casing practice of the cable-tool drillers who have been entrusted with the development of the field thus offers no opportunity for economy of pipe, as no less casing would be required if drilling were done by the rotary method.

A prominent drilling contractor who has drilled a number of wells in the area described the formations lying above the Oriskany sand, pay zone of the area, as follows:

"The first 600 to 800 feet consists of lime, shells and slate. The next 2000 feet includes shale and slate, interspersed with lime shells one to two feet thick; all easy drilling. At about 3000 to 3500 feet, depending on elevation, we strike the 'big lime,' otherwise known as the 'thousand-foot lime,' because it lies about 1000 feet above the pay. This lime rock is about 60 feet thick, and is very hard. Below this, we have an interval of about 500 feet of slate and shale. Then we strike the 'five-hundred-foot lime,' so called because it occurs about 500 feet above the pay. This latter formation is not found in all wells; but, where found, it is rather hard, and of a thickness of five to 20 feet. Below this formation, we find the Marcellus shale, which is sandy and very dark, sometimes as black as coal; very good cable-tool digging. Under the Marcellus shale, which has a thickness of about 200 feet, we strike 20 to 30 feet of black lime, called the Onondaga lime. An extremely hard cap-rock, which is of slate and has a thickness of two to five feet, lies immedi-




**STRUCTURE MAP OF GAINES, ELKLAND, TIOGA QUADRANGLES**
Structure contours after U. S. Geological Survey

**LIST OF WELLS IN TIOGA REGION**

| | | | | | |
|---|---|---|---|---|---|
| 1—Palmer No. 1 | 11—Bertch | 20—Boom | 29—Buckbee | 42—Whitney | 58—Jerald |
| 2—Kemp | 12—Ackley | 21—Decker | 30—Hoyt No. 2 | 43—Roe | 59—Ryder |
| 3—Bostwick | 13—Palmer No. 2 | 22—Burdett, G. | 31—Ashton | 46—Smith, A. C. | 60—Cummings |
| 4—Farr No. 1 | 14—Davey | 23—Learn | 32—Manning | 47—Ryan | 61—Van Zile |
| 5—Howe Est. | 15—Harrison | 24—Davis | 33—Wheeler, F. | 48—Smith, S. A. | 63—Wilson & Kuhl |
| 6—Meaker | 16—Farr No. 2 | 25—Close, E. W. No. 2 | 34—West | 49—Carey | 65—Leslie |
| 7—Shoemacker | 17—Herrington | 26—Place | 39—Burdett, M. A. | 50—Loveless | 67—Craft |
| 8—Adams | 18—Close, M. P. No. 1 | 27—Bache | 40—Tremain, J. E. | 52—Frisbee | 68—Schofield |
| 9—Close, E. W. | 19—Hoyt No. 1 | 28—Elliot Heirs | 41—Tremain, Chas. | 53—Van Duzen | 69—House, Bertha |
| 10—Price | | | | | |

# Status of Drilling in Tioga Region

| No. on map | Name of Well | Reported Owners | County | Township | Elev. Well | Total Depth | Elev. Top Orsky. | Structure | Status | Results |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Palmer 1 | East Penn Dev. Co. | Tioga | Fmgton. | 1764 | 4012 | —2242 | Sabinsville | Producing | 2,600,000 |
| 2 | Kemp 1 | East Penn Dev. Co. | Tioga | Fmgton. | 1712 | 5375 | —2638 | Sabinsville | Abandoned | Sh. s. w. |
| 3 | Bostwick 1 | J. E. Trainer | Tioga | Lawrence | 1509 | 4197 | —2682 | Sabinsville | Abandoned | Salt w't'r |
| 4 | Farr 1 | Lycoming N. G. C. | Tioga | Lawrence | 1367 | 3782 | —2406 | Sabinsville | Shut in | 10,000,000 |
| 5 | Howe, Est. 1 | Lycoming N. G. C. | Tioga | Fmgton. | 1743 | 4391 | —2632 | Sabinsville | Abandoned | Salt w't'r |
| 6 | Meaker 1 | Penn United | Tioga | Lawrence | 1677 | 4203 | —2520 | Sabinsville | Shut in | 70,000,000 |
| 7 | Shoemaker 1 | Lycoming N. G. C. | Tioga | Lawrence | 1474 | 7148 | —2458 | Sabinsville | Abandoned | Dry sand |
| 8 | Adams 1 | Adams Gas & Oil Co. | Tioga | Chlstn. | 1317 | | | Wellsboro | S. D. 4950 | |
| 9 | Close, E. W., 1 | Lycoming N. G. C. | Tioga | Fmgton. | 1755 | 4022 | —2263 | Sabinsville | Shut in | 25,000,000 |
| 10 | Price, E. E. 1 | Lycoming N. G. C. | Tioga | Fmgton. | 1676 | 4285 | —2600 | Sabinsville | Abandoned | Salt w't'r |
| 11 | Bertch 1 | Segar Oil & Gas Co. | Tioga | Brkfld. | 1840 | 4921 | —3024 | Harrison | Abandoned | Dry sand |
| 12 | Ackley 1 | Lycoming N. G. C. | Tioga | Clymer | 1934 | 5083 | —3086 | Sabinsville | Abandoned | Dry sand |
| 13 | Palmer 2 | East Penn Dev. Co. | Tioga | Fmgton. | 1849 | 4095 | —2244 | Sabinsville | Producing | 23,000,000 |
| 14 | Davey 1 | East Penn Dev. Co. | Tioga | Richmond | 1335 | | —3950 | Wellsboro | Dr. 5285 | |
| 15 | Harrison 1 | Leonard Oil Co. | Tioga | Lawrence | 1049 | 3750 | —2432 | Sabinsville | Abandoned | Dry sand |
| 16 | Farr 2 | Lycoming N. G. C. | Tioga | Lawrence | 1687 | 4203 | —2511 | Sabinsville | Abandoned | Salt w't'r |
| 17 | Herrington 1 | Lycoming N. G. C. | Tioga | Lawrence | 1720 | 4220 | —2498 | Sabinsville | Shut in | 25,000,000 |
| 18 | Close, M. P., 1 | Lycoming N. G. C. | Tioga | Lawrence | 1634 | 4135 | —2500 | Sabinsville | Shut in | 70,000,000 |
| 19 | Hoyt 1 | Lycoming N. G. C. | Tioga | Fmgton. | 1680 | 4037 | —2350 | Sabinsville | Shut in | 13,000,000 |
| 20 | Boom 1 | Lycoming N. G. C. | Tioga | Lawrence | 1563 | 3811 | —2244 | Sabinsville | Shut in | 20,000,000 |
| 21 | Decker 1 | Lycoming N. G. C. | Tioga | Lawrence | 1501 | 4781 | —3194 | Sabinsville | Abandoned | Dry sand |
| 22 | Burdett, G., 1 | Penn United | Tioga | Lawrence | 1572 | 4145 | —2567 | Sabinsville | Shut in | 7,000,000 |
| 23 | Learn 1 | East Penn Dev. Co. | Tioga | Fmgton. | 1837 | 4069 | —2231 | Sabinsville | Shut in | 22,000,000 |
| 24 | Davis 1 | Penn United | Tioga | Chatham | 1707 | 4723 | —2965 | Sabinsville | Abandoned | Dry sand |
| 25 | Close, E. W., 2 | Lycoming N. G. C. | Tioga | Fmgton. | 1747 | 4036 | —2283 | Sabinsville | Shut in | 13,000,000 |
| 26 | Place 1 | Lycoming N. G. C. | Tioga | Fmgton. | 1849 | 4280 | —2423 | Sabinsville | Shut in | 4,800,000 |
| 27 | Bache 1 | Williamsport Oil & G. | Tioga | Fmgton. | 1645 | 4956 | —3242 | Sabinsville | Abandoned | Dry sand |
| 28 | Elliott Heirs 1 | Sylvania Co. | Tioga | Lawrence | 1506 | 4134 | —2623 | Sabinsville | Abandoned | Salt w't'r |
| 29 | Buckbee 1 | Manufacturers Gas | Tioga | Lawrence | 1542 | 4254 | —2712 | Sabinsville | Abandoned | Salt w't'r |
| 30 | Hoyt 2 | Lycoming N. G. C. | Tioga | Fmgton. | 1730 | | —2391 | Sabinsville | Shut in | 7,250,000 |
| 31 | Ashton 1 | Lycoming N. G. C. | Tioga | Fmgton. | 1625 | 3977 | —2345 | Sabinsville | Shut in | 10,000,000 |
| 32 | Manning 1 | East Penn Dev. Co. | Tioga | Fmgton. | 1785 | 4103 | —2313 | Sabinsville | Shut in | 15,000,000 |
| 33 | Wheeler, F., 1 | Penn United | Tioga | Tioga | 1580 | 4322 | —2735 | Sabinsville | Abandoned | Salt w't'r |
| 34 | West, A., 1 | Lycoming N. G. C. | Tioga | Lawrence | 1564 | 4760 | —3148 | Sabinsville | Abandoned | Dry sand |
| 35 | Weiboldt 1 | Moody Seagraves | Tioga | Elk | 1870 | 6045 | —4122 | Wellsboro | Abandoned | Dry sand |
| 36 | Braested 1 | Moiserville Oil & Gas | Bradford | Wells | 1600 | 4750 | —3119 | Sabinsville | Abandoned | Dry sand |
| 37 | Meyers 1 | C. H. Schrack | Lycoming | Shrwsby | | | | Muncy Valle | S. D. 4000 | |
| 38 | McKelvey 1 | Heill et al | Clrfield. | Bradford | 1600 | | | Laurel Hill | S. D. 5800 | |
| 39 | Burdett, M. & G. 1 | North Branch Dev. Co. | Tioga | Lawrence | 1273 | 3647 | —2317 | Sabinsville | Shut in | 2,000,000 |
| 40 | Tremain, J. E. 1 | Penn United | Tioga | Lawrence | 1005 | 3980 | —2350 | Sabinsville | Shut in | 150,000 |
| 41 | Tremain, Chas. 1 | Lycoming N. G. C. | Tioga | Lawrence | 1531 | 4130 | —2468 | Sabinsville | Abandoned | Sh. s. w. |
| 42 | Whitney 1 | Morgan Hague | Tioga | Fmgton. | 1561 | 4780 | —3203 | Sabinsville | Abandoned | St. water |
| 43 | Roe 1 | Wier & Thorn | Tioga | Lawrence | 1406 | 4249 | —2778 | Sabinsville | Abandoned | Dry sand |
| 44 | County Home 1 | Wells Corporation | Tioga | Chlstn. | 1390 | | | Wellsboro | Dr. 5315 | |
| 45 | Hettick 1 | Penn-York | Bradford | Towanda | 1280 | | —3883 | Towanda | Dr. 5167 | |
| 46 | Smith, A. C. 1 | East Penn Dev. Co. | Tioga | Lawrence | 1487 | 4692 | —3093 | Sabinsville | Abandoned | Dry sand |
| 47 | Ryan 1 | Morgan Hague | Tioga | Lawrence | 1056 | 4298 | —3196 | Sabinsville | Abandoned | Dry sand |
| 48 | Smith, S. A. 1 | Penn United | Tioga | Tioga | 1558 | 4416 | —2750 | Sabinsville | Abandoned | Dry sand |
| 49 | Carey 1 | Wade & Moore | Tioga | Tioga | 1038 | 4317 | —3247 | Sabinsville | Abandoned | Dry sand |
| 50 | Loveless 1 | Taylor-Lynch | Tioga | Tioga | 1187 | 6028 | —4823 | Pine Cr. Syn. | Abandoned | Dry sand |
| 51 | Wheeler, I. B. 1 | Lycoming N. G. C. | Tioga | Delmar | 1820 | | —3699 | Wellsboro | Dr. 5529 | |
| 52 | Frisbee 1 | Elkland Oil & Gas | Tioga | Nelson | 1436 | | | Cowanesque S. | S. D. 4200 | |
| 53 | Van Duzen 1 | Elkland Oil & Gas | Tioga | Fmgton. | 1814 | | | Sabinsville | S. D. 4585 | |
| 54 | Booth 1 | Hungiville & Co. | Potter | Hebron | 1847 | 4925 | —3076 | Hebron | Shut in | 7,500,000 |
| 55 | Olsen 1 | Jas. Duff et al | Bradford | Columbia | 1856 | | —3789 | Wellsboro | S. D. 5690 | |
| 56 | Brad. Co. Ag. School | Penn United | Bradford | Wysox | 740 | | | Towanda | S. D. 5307 | |
| 57 | Mitchell 1 | Overtine et al | Bradford | Troy | 1140 | | | Blsbrg. Syn. | S. D. 2961 | |
| 58 | Gerald 1 | Lyons et al | Tioga | Richmond | 1349 | | | Wellsboro | S. D. 2880 | |
| 59 | Ryder 1 | Brad. Lawrence | Tioga | Lawrence | 1224 | 4013 | —2781 | Sabinsville | Abandoned | Dry sand |
| 60 | Cummings, G. 1 | Vaughn & Rose | Tioga | Mdlbury. | 1756 | | —3222 | Sabinsville | Abandoned | Dry sand |
| 61 | Van Zile 1 | Mellon & Pollock | Tioga | Lawrence | 1523 | 3768 | —2241 | Sabinsville | Shut in | 25,000,000 |
| 62 | Morris 1 | Scranton Water Co. | Bradford | Orwell | 925 | | | Rome | Dr. 4355 | |
| 63 | Wilston & Kuhl | North Branch Dev. Co. | Tioga | Lawrence | 1573 | 4040 | —2462 | Sabinsville | Shut in | 13,500,000 |
| 64 | Moore, Capt. 1 | Lk. O'Medowis O.&G. | Susq. | Appolacon | 1575 | | | Rome | S. D. 4400 | |
| 65 | Leslie 1 | East Penn Dev. Co. | Tioga | Fmgton. | 1893 | 4088 | —2192 | Sabinsville | Shut in | 40,000,000 |
| 66 | Croft 1 | Universal Oil & Gas | Tioga | Lawrence | 1226 | | | Sabinsville | S. D. 4070 | |
| 67 | Schofield - | W. W. Keefer et al | Tioga | Richmond | 1445 | | | Wellsboro | S. D. 3020 | |
| 68 | House, Bertha 1 | North Branch Dev. Co. | Tioga | Fmgton. | 1777 | 4666 | —2938 | Sabinsville | Abandoned | Dry sand |
| 69 | Penn United Boom 1 | Penn United | Tioga | Lawrence | 1696 | 4187 | —2386 | Sabinsville | Abandoned | Sh. s. w. |
| 70 | Barcroft | North Branch Dev. Co. | Tioga | Lawrence | 1609 | 3982 | —2335 | Sabinsville | Shut in | 6,000,000 |
| 71 | Gee, Leander | Shaler Oil Co. | Tioga | Mdlbury. | 1514 | | | Sbsvle s flnk | S. D. 4750 | |
| 72 | Russell | Penn United | Tioga | Fmgton. | 1646 | 4010 | —2338 | Sabinsville | Shut in | 10,000,000 |
| 73 | West, W. | Lester & Miller | Tioga | Tioga | 1065 | | | Pine Cr. Syn. | Dr. 5412 | |
| 74 | Gee, Leander | Penn United | Tioga | Fmgton. | 1812 | 4274 | —2442 | Sabinsville | Shut in | 4,250,000 |
| 75 | Cummings, Earl | Hultsinger et al | Tioga | Mdlbury. | 1606 | 4110 | —3497 | Sbsvle s flnk | Abandoned | Dry sand |
| 76 | Hughes 1 | Midwest Oil & Gas | Tioga | Tioga | 1432 | | | Sabinsville | Dr. 4293 | |
| 77 | Smith, H. G. 1 | Tallaferro | Tioga | Tioga | 1040 | 5306 | —4195 | Sbsvle s flnk | Abandoned | Dry sand |
| 78 | Middaugh 1 | North Branch Dev. Co. | Tioga | Lawrence | 1673 | 4672 | —2931 | Sabinsville | Abandoned | Dry sand |
| 79 | Colegrove 1 | North Branch Dev. Co. | Tioga | Lawrence | 1610 | 4004 | —2340 | Sabinsville | Shut in | 2,500,000 |
| 80 | Herrington 2 | Lycoming N. G. C. | Tioga | Lawrence | 1620 | 4113 | —2473 | Sabinsville | Abandoned | Sh. s. w. |
| 81 | Durfee 1 | Workman et al | Tioga | Lawrence | 1439 | 4019 | —2543 | Sabinsville N. flank | Abandoned | Dry sand |
| 82 | Meaker 2 | Penn United | Tioga | Tioga | 1702 | | | Sabinsville | Dr. 4485 | |
| 83 | Boom 2 | Lycoming N. G. C. | Tioga | Lawrence | 1732 | 4036 | —2297 | Sabinsville | Shut in | 4,500,000 |
| 84 | Butters 1 | Morris Run Coal Co. | Tioga | Union | 1000 | | | Towanda | Dr. 3335 | |
| 85 | Hall 1 | East Penn Dev. Co. | Tioga | Fmgton. | 1763 | | | Sabinsville | Dr. 4100 | |
| 86 | Gee, Leo 1 | Allen Reed Trustee | Tioga | Lawrence | 1286 | | | Sabinsville | S. D. 652 | |
| 87 | Emporium Lbr. Co. | East Penn Dev. Co. | Potter | E. Fork Dis | 1934 | | | Marshfield | Dr. 1100 | |
| 88 | Brown 1 | Penn York | Bradford | Stevens | 1260 | | | Towanda | Dr. 6057 | |
| 89 | Dickinson 1 | York Penn | Bradford | W. Brlgtn. | 1245 | | | Blossburg S. | S. D. 5450 | |
| 90 | Updegraff, C. E. 1 | Updegraf et al | Tioga | Rutland | | | | Wellsboro | Dr. 275 | |
| 91 | Wilston | Penn United | Tioga | Fmgton. | 1606 | | | Sabinsville | Dr. 2350 | |
| 92 | Learn, Dana 1 | Mutual Nat. Gas Co. | Tioga | Lawrence | 1649 | | | Sabinsville | Dr. 3192 | |
| 93 | Kennedy 1 | W. Keefer, Jr. | Bradford | Ulster | | | | Rome | S. D. 1580 | |
| 94 | Presby. Church Lot | Mutual Nat. Gas Co. | Tioga | Fmgton. | | | | Sabinsville | Dr. 440 | |
| 95 | Bryent, E. | Shaler et al | Tioga | Tioga | | | | Sabinsville | Rig up | |
| 96 | Wheeler, F. 2 | Vaughn & Rose | Tioga | Tioga | | | | Sabinsville | Bldg. rig | |
| 97 | McCullum | Workman et al | Tioga | Fmgton. | | | | Sabinsville | Dr. 350 | |
| 98 | Thomas, Chas. | East Penn Dev. Co. | Tioga | Fmgton. | | | | Sabinsville | Moving in | |
| 99 | Carmer | East Penn Dev. Co. | Potter | Hebron | | | | Hebron | Loc. | |
| 100 | Smith, I. N. | East Penn Dev. Co. | Tioga | Lawrence | | | | Sabinsville | Digging cel | |

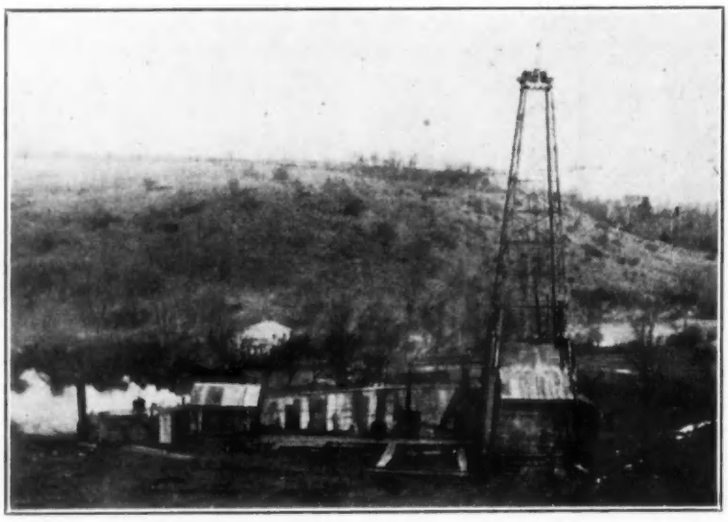
Information by courtesy of companies operating in this field. Especially the Penn United Gas Company, East Penn Development Company, Lycoming Natural Gas Corporation.

ately above the Oriskany sand.

"We cement our production strings in the Onondaga lime, above referred to, for which work we employ a Halliburton crew, stationed at Painted Post, New York. Virtually all drilling is done by contract.

"We can complete a 4000-foot well in 60 days, at a cost, to the owner, of $7600 to $9000, exclusive of casing. Wells of the maximum depth, 4280 feet, might cost nearly $10,000 for the drilling. The minimum depth at which production is found is around 3650 feet. Contractors furnish the derrick, rig, labor, and supplies; and are paid at the rate of $1.90 to $2.25 per foot. Higher rates prevail on wildcat locations."

Steel derricks (84 feet in height) are customarily used, being moved from location to location by the contractors.



*Typical cable-tool drilling operation in the Tioga Gas Field, Northern Pennsylvania*

Drilling is done by ordinary standard rigs, which usually include steel band- and bull-wheel components. Power is derived from every type of prime mover ever seen in the oil fields, including steam engines, gas engines, and multi-cylinder gasoline motors. The first 2500 to 3000 feet of hole is cut with seven-eighths-inch wire lines, with 300 feet of 2⅜-inch manila on the end. A one-inch wire line is usually substituted for the smaller line for drilling the last 1000 to 1500 feet.

A test well now in progress on the Wellsboro anticline, a companion structure to the Sabinsville anticline on which the Tioga field is located, penetrated a very troublesome heaving shale below 4500 feet. This shale is the genesis of current discussion regarding the possible introduction of rotary equipment.

**Log of Shoemaker No 1, Tioga County, Penna.**

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| Geologic Name | | From | To |
|---|---|---|---|
| | Gravel | 24 | 40 |
| Chemung | Slate, white | 40 | 157 |
| Chemung | Shells, limy | 157 | 327 |
| Chemung | Sand, gray | 327 | 370 |
| Chemung | Sand, dark | 370 | 400 |
| Chemung | Slate and shell, limy | 400 | 558 |
| Chemung | Sand, dark | 558 | 570 |
| Chemung | Slate and shell, limy | 570 | 603 |
| Chemung | Sand, dark | 603 | 625 |
| Chemung | Slate and shell, limy | 625 | 732 |
| Chemung | Shell, limy | 732 | 741 |
| Chemung | Slate | 741 | 761 |
| Chemung | Slate and shell (gas 923) | 761 | 1008 |
| Portage | Sand, dark | 1008 | 1055 |
| Portage | Slate and shell | 1055 | 1252 |
| Portage | Sand, dark | 1252 | 1270 |
| Portage | Slate and shell | 1270 | 1289 |
| Portage | Sand, dark | 1289 | 1318 |
| Portage | Slate and shell | 1318 | 1410 |
| Portage | Slate and shell | 1410 | 1944 |
| Portage | Shale, brown | 1994 | 2080 |
| Portage | Sand, dark | 2080 | 2102 |
| Portage | Slate and shells | 2102 | 2250 |
| Portage | Slate and shell, limy | 2250 | 2480 |
| Portage | Slate, limy shells | 2480 | 2532 |
| Portage | Slate, shell, gray | 2532 | 2573 |
| Portage | Slate, shell, gray | 2573 | 2642 |
| Portage | Slate shell, brown | 2642 | 2720 |
| Portage | Shale, brown | 2720 | 2750 |
| Genesee | Shale, brown | 2750 | 2909 |
| Tully | Shale, limy | 2909 | 2965 |
| Tully | Shale, dark | 2965 | 2980 |
| Tully | Shale, brown | 2980 | 2991 |
| Hamilton | Shale, brown | 2991 | 3068 |
| Hamilton | Slate, shell, dark | 3068 | 3153 |
| Hamilton | Shale blue | 3153 | 3360 |
| Hamilton | Lime, dark | 3360 | 3404 |
| Hamilton | Slate and shell, gray | 3404 | 3460 |
| Hamilton | Shale, black | 3460 | 3490 |
| Hamilton | Shale, brown | 3490 | 3707 |
| Marcellus | Shale, brown | 3707 | 3770 |
| Marcellus | Shale, black | 3770 | 3792 |
| Marcellus | Shale, brown | 3792 | 3879 |
| Marcellus | Shale, black | 3879 | 3913 |
| Onondaga | Lime, black | 3913 | 3930 |
| Oriskany | Sand, gray | 3930 | 3953 |
| Oriskany | Sand, dark | 3953 | 3980 |
| Helderberg | Lime, dark | 3980 | 3988 |
| Helderberg | Lime, slate and shell | 3988 | 4018 |
| Helderberg | Lime, dark | 4018 | 4261 |
| Salina | Slate and shell, dark | 4261 | 4430 |
| Salina | Salt shale | 4430 | 4782 |
| Salina | Shale, brown | 4782 | 4790 |
| Salina | Salt, white | 4790 | 4816 |
| Salina | Salt, and slate, dark | 4816 | 4990 |
| Salina | Shell, dark | 4990 | 4992 |
| Salina | Salt, shale, dark | 4992 | 5189 |
| Salina | Slate, dark | 5189 | 5194 |
| Salina | Slate, limy shells | 5194 | 5237 |
| Salina | Lime, brown | 5237 | 5289 |
| Salina | Salt, shale, dark | 5289 | 5376 |
| Salina | Salt, gray | 5376 | 5459 |
| Salina | Lime, dark | 5459 | 5486 |
| Salina | Limy shell and slate | 5486 | 5527 |
| Salina | Salt | 5527 | 5552 |
| Salina | Lime, dark | 5552 | 5565 |
| Salina | Lime | 5565 | 5589 |
| Salina | Lime, dark | 5589 | 5601 |
| Salina | Salt, shale | 5601 | 5645 |
| Salina | Lime (little salt water) | 5645 | 5652 |
| Salina | Slate, white | 5652 | 5690 |
| Salina | Slate, dark | 5690 | 5770 |
| Salina | Slate and shell, dark | 5770 | 5782 |
| Salina | Niagara lime, brown | 5782 | 5838 |
| Salina | Lime, gray | 5838 | 5844 |
| Salina | Lime, brown | 5844 | 5863 |
| Salina | Slate, gray | 5863 | 5875 |
| Salina | Lime, gray | 5875 | 5887 |
| Salina | Lime, slate, gray | 5887 | 5905 |
| Salina | Slate, white | 5905 | 6030 |
| Salina | Slate, dark | 6030 | 6041 |
| Salina | Slate and salt, dark | 6041 | 6047 |
| Salina | Salt, dark | 6047 | 6077 |
| Salina | Lime, brown | 6077 | 6087 |
| Salina | Lime, black | 6087 | 6120 |
| Salina | Lime and salt, black | 6120 | 6127 |
| Salina | Salt, dark | 6127 | 6134 |
| Salina | Lime, brown | 6134 | 6147 |
| Salina | Salt, gray | 6147 | 6166 |
| Salina | Lime, black | 6166 | 6172 |
| Salina | Lime, gray | 6172 | 6178 |
| Salina | Lime, black | 6178 | 6196 |
| Salina | Slate, dark | 6196 | 6204 |
| Salina | Lime, gray | 6204 | 6233 |
| Salina | Salt, gray | 6233 | 6342 |
| Salina | Salt and shale, dark | 6342 | 6401 |
| Salina | Salt, gray | 6401 | 6410 |
| Salina | Salt and shale, dark | 6410 | 6418 |
| Salina | Slate, brown | 6418 | 6447 |
| Salina | Salt, and slate, dark | 6447 | 6508 |
| Salina | Lime, dark | 6508 | 6530 |
| Vernon shale | Slate, green | 6530 | 6775 |
| Vernon shale | Slate, dark | 6775 | 6794 |
| Vernon shale | Limy | 6794 | 6799 |
| Vernon shale | Slate, dark | 6799 | 6817 |
| Vernon shale | Shale, green | 6817 | 6880 |
| Vernon shale | Slate, dark | 6880 | 6963 |
| Vernon shale | Slate, light | 6963 | 7019 |
| Vernon shale | Red rock | 7019 | 7148 |
| | Total depth | | 7148 |

# Engineers Urge Restricted Flow Continuance in East Texas

(*Conitnued from page 13*)

ference there would be in the salt water intrusion with the field producing only 300,000 barrels daily, and with it producing 400,000 or 500,000 barrels daily or more. Foran asserted that the encroachment is less under the lower rate of withdrawal.

Andrade then asked if it would not be possible to increase the production allowance of the field without damage if produced gas were used for repressuring the sand. Foran replied it would be if the pool were treated as a unit, but probably not otherwise.

Myron Blalock, attorney for an East Texas producing company, questioned Foran at length in regard to the maps the latter had presented to show pressure conditions in the field, attempting to elicit the admission from Foran that there was room for doubt as to the accuracy of the maps or the data upon which they were based. But Foran would not make such a concession, affirming that he was present during recording of some of the pressures, while in the other instances the information was from sources which he firmly believed to be accurate, as it came from competent engineers of various companies which had carried out the bottom hole pressure tests.

### Millikan Testifies

Apparently in substantiation of Foran's assertions defending the accuracy of the pressure maps, C. V. Millikan, chief petroleum engineer of Amerada Petroleum Corporation, was presented as a witness, and was questioned by Hardwicke. Millikan stated that he had taken closed-in pressure records on more than 100 wells in all parts of the East Texas field, and that his company was recognized, he believed, as a pioneer in the area in use of recording pressure gage for the purpose. The instrument used, he said, is accurate within less than one per cent. The tests which he made were not only on wells of his company but in many cases in wells of other owners. The maps which Foran had presented were still up, and on questioning, Millikan pointed to that representing November pressures and said that it corresponded very closely with a similar map which he had prepared in his work for Amerada Petroleum Corporation.

Millikan was led by C. Andrade into a discussion of the possible ultimate recovery of oil from the East Texas field, and he offered the estimate that the field will produce from 1,000,000,000 to 2,000,000,000 barrels, or from 10,0000 to 20,000 barrels per acre, depending upon production methods practiced. The higher yields, he said, can be attained only through orderly production, while disorderly and disproportionate withdrawals will more likely result in the mentioned minimum yield.

Andrade again brought up the subject of repressuring, asking Millikan if that process could not make it possible to produce 150 barrels daily per well without waste. The witness conceded that repressuring under proper circumstances would make higher allowances practicable.

J. R. Parten of Woodley Petroleum Company, Shreveport, Louisiana, stated his company has 14 wells in East Texas, which have been operated in accordance with regulations of the railroad commission and of the martial law authorities, and he said he believed there had been a minimum of waste in the field. He offered the opinion that wells in East Texas offered practically no danger of being damaged through small production allowances. He said he knew of no well which had been hurt by being pinched to a small output. In connection with effective gas-oil ratios, Parten expressed the belief that there is not a wide range in the ratio between a well producing at the rate of 400 barrels daily or at the rate of 75 barrels per day. He said he preferred to produce the allowable production during the full 24 hours of the day rather than to obtain the allowance within a few hours and then to shut the well in the remainder of the day, but stated that the preference was due to an idea that the well might be damaged by opening and closing rather than to any scientific investigation, conceding that perhaps the part-time production plan might be more sound.

The Austin hearing commenced with an invitation by C. V. Terrell, chairman of the railroad commission, for recommendations or testimony by anyone present relative to conditions in East Texas. The other two members of the commission are Pat M. Neff and Lon A. Smith. Only after considerable waiting, however, could the chairman launch the hearing, since no one volunteered at first to offer any discussion.

At length W. A. Wise, East Texas oil producer and resident of Tyler, opened discussion by suggesting that all wells in Texas under 4000 feet in depth should be prorated to 75 barrels daily, as the East Texas field, with its total of somewhat more than 4000 producing wells, is restricted under the current program. Chairman Terrell replied, however, that the hearing had been called for the express and sole purpose of considering only the East Texas field, and that discussion must consequently be confined to problems in that particular field.

J. K. Wells of Tyler said he believed he was reflecting the sentiment of a large majority of the independent operators and in fact of all interested parties in expressing approval of the existing conservation program in East Texas under which wells are limited to 75 barrels production daily. Although he sanctioned the 75-barrel allowance, he said he did not believe that the small operators in East Texas could stand much more reduction: that they must be able to take some production from their properties in order to keep on operating. If the allowance is reduced below 75 barrels daily, he said, there will no doubt be much protest.

### To Enforce Pipe Line Law

C. Andrade asked if the railroad commission proposes to enforce the ratable takings pipe line law in connection with East Texas conservation if it assumes control of the field, and he was informed by Chairman Terrell that the mentioned law would be applied.

Andrade further offered the suggestion that whatever order the commission may issue, it should be upon a basis assuring the producer a definite allowance per week. Under existing conditions, he said, the operator is allowed 75 barrels daily per well, but since purchasing companies and pipe lines have been limiting operations largely to six days per week, the producer is further penalized by being cut to 75 barrels daily for six days weekly, or to an average of 64-2/7 barrels daily for the full week. Some of the East Texas operators resent that situation, he declared, and feel that they should be allowed to take during a week enough oil to equal 75 barrels daily per well for seven days. Any order by the commission, he insisted, should remedy that situation. Others at the hearing concurred in that opinion, and it was intimated that the adjustment would be made if the commission issues an order.

Myron Blalock, Marshall, Texas, attorney, expressed sat-

isfaction with the plan of regulating the field by making the allowance strictly upon the "per well" basis, saying the plan was the only one justified under the present statute. He said the operators he represented were willing to leave to the railroad commission the decision as to what the allowable should be.

Before Foran took the witness stand in representing the Texas Oil & Gas Conservation Association, R. E. Hardwicke, as attorney for that organization moved that testimony which had been used in the last previous hearing of the railroad commission on East Texas be introduced again as testimony for this new hearing, and it was decided to incorporate that former evidence into the records of the new hearing.

The hearing with regard to possible control of the field by the railroad commission concluded when the testimony and questioning of J. R. Parten ended, and Chairman Terrell then announced that the commission would next hear suggestions and discussion relative to rules and regulations which would be issued in connection with drilling and production practices in event the commission again assumes control of the East Texas field.

### Rules Proposed

W. F. Knode, petroleum engineer for the railroad commission, read a list of proposed rules and regulations, which he said were prepared after consultation with engineers of numerous operators in the field. The proposed regulations, he said, were largely the same as those which the railroad commission had issued in its order of September 2, 1931, and subsequent orders, although several alterations and additions were incorporated in the new set of rules. It was suggested by Terrell that Knode read all the proposed rules, and that objections or suggestions be offered from the audience following the reading.

Alexander Boynton, San Antonio oil operator and manufacturer of an automatic stage lift flowing device operated from an air compressor station or with gas from producing wells, recommended that the former rule providing that "No air or gas lift artificially applied shall be used in the East Texas oil field" be changed to read: "Air or gas lift can be used so long as such use holds production of oil or gas within the limits set by the railroad commission." He contended that the use of the device which he made, and possibly similar devices of other makers, would entail no waste, but would actually contribute toward conservation.

R. J. McMurray objected to the requirement for tubing the East Texas wells, saying he did not believe the cost of from $1500 to $2000 for installing the tubing is warranted inasmuch as the small amount of allowable production is taken necessarily through a very small opening at the well head. Earl Callaway took the opposing view, however, that the tubing should be used, saying tests by petroleum engineers had indicated the gas-oil ratio was much lower on wells produced through tubing, the tubing saving approximately 30 per cent of the amount of gas used.

J. R. Parten made the suggestion that the commission should require operators to allow the cement to set for 72 hours after cementing casing above the producing sand in East Texas to assure effective shut-offs. He cited one particular instance in which the cement was not allowed sufficient time to harden with the result that the casing had to be re-cemented, and pointed out that such a practice offers possibilities of important damage not only to the well being cemented but also to neighboring wells. This suggestion seemed to have the approval of a large number of the operators present, and the commission was expected to give it important consideration and possibly to adopt it.

## Federal Court Upholds Texas Natural Gas Waste Regulation

Austin, Texas.—A policy of strict enforcement of the conservation laws as applied to natural gas was announced by the Texas Railroad Commission last week, following the announcement by the federal court of a unanimous decision in favor of the state on the Henderson Gas case.

F. C. Henderson, Inc., operated gasoline plants in the Panhandle for whose consumption considerable natural gas with a small gasoline content was produced. The residue gas was blown into the air, and the commission sought to close these wells until such time as facilities were prepared to dispose of the residue for light, fuel or power. The operator, in turn, sought an injunction to prevent the enforcement of this order. This was refused by the court and on a cross action an injunction was granted the commission to force the shutting in of the wells, at least until he provided for disposition of the residue.

The decision was written by Circuit Judge J. C. Hutcheson, and the opinion was approved by Judges West and Grubb. In brief, the court said,

"Delegation of the power to the railroad commission to conserve oil and gas resources has been universally recognized as reasonable, valid and appropriate. The court does not hold that if proof were made, the law forever denied the gas owner of a market that he would be entitled to no relief. Unless measures are taken to prevent the wasteful handling and use of the gas, these apparently vast resources will soon be dissipated, never to be reclaimed. We see nothing unreasonable in the statute, and especially nothing unreasonable in its application to the plaintiff and its contractors, whose use of gas is not only in direct violation of the purposes of the statute, but its very terms, constituting as it does reckless and improvident waste of the plainest kind."

## Argument on Jurisdiction Continues in Ouster Suit

Austin, Texas.—Pleadings on the question of default judgments against four oil concerns were resumed in the Ninety-Eighth District court here Wednesday, after a recess from Friday of last week. Standard Oil Company of New Jersey, Standard Oil Company of California, Socony-Vacuum Corporation, and Shell-Union Oil Corporation are the four against which judgments by default are being asked on the grounds that they failed to answer the petitions filed by James V. Allred, attorney general.

Attorneys for the oil companies have contended that the state is without jurisdiction in regard to these corporations because they have no permits to do business in Texas.

After there has been a ruling on this question the next matter to be debated will concern pleas of abatement alleging misjoinder of parties and misjoinder of action. The oil concerns will through these seek to have separate actions taken in regard to each of the defendants. Two weeks will be required for arguments on these questions.

Another matter of law to follow these pleas will concern the constitutionality of the anti-trust laws of Texas. The defendants will seek to cast these statutes as in violation of the constitution of the United States as well as the constitution of Texas.

Should the court hold the four companies in default for failure to answer, penalties of $1,074,000 will be assessed against the four concerns which failed to make answer.

In the case of The Texas Company its officials are due to appear in Austin the latter part of the month so testimony can begin before George E. Shelly, the commissioner named by Judge Black to take the testimony.

# Personal Mention—Men You Know

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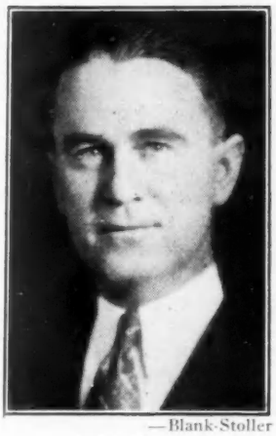
J. R. PEMBERTON, formerly manager of operations for Petroleum Securities Company, has returned to Los Angeles after an extended tour along the coast of western Mexico. He used his own Diesel boat to make the tour, and was host to a party of scientists and naturalists.

J. E. GOBLE, who formerly represented the Oil Well Supply Company in South America, with headquarters at Maracaibo, but who was transferred to the company's export division at New York about two years ago, has been named manager of that division, succeeding W. H. Wittiken, now general manager, with headquarters at Dallas, Texas.



—Blank-Stoller

J. E. GOBBLE

C. M. FULLER, formerly president of Richfield Oil Company of California, has resigned as an officer of Emblem Petroleum Corporation.

WILLIAM GORDON has resigned as assistant oil umpire for California, under Neal Anderson, and will resume his practice as appraisal engineer.

ANDREW LUCAS, vice-president of Doyle Petroleum Corporation of Los Angeles, is recuperating at Belgrade after an illness of six weeks. He was stricken with appendicitis while touring Europe. Mrs. Lucas left Los Angeles February 1 for Paris, where Mr. Lucas will join her, and they will tour southern France.

F. B. COX, independent operator and president of Pan American Products Company, is in New York to negotiate with Eastern interests which are helping to finance California operations.

J. A. BROWN has been elected president of Kettleman North Dome Association. R. E. Collom and C. P. Watson were elected vice-presidents, and C. E. Sampson was named secretary and treasurer.

JOHN E. NEELY, well-known independent oil operator of the Mid-Continent and Southwest Texas fields died at his farm home near Natalia February 11. The body was forwarded to Fayetteville, Arkansas, the family home, for burial. About two years ago Neely moved from Tulsa and since that time has been living on the farm which he purchased in Medina County. He was particularly well-known throughout the fields of Oklahoma and West Texas where he operated for a number of years.

JUDGE THOMAS J. LAWHON, general attorney for The Texas Company, prominent throughout Texas in legal, oil industry and church activities, died at the Memorial hospital in Houston February 12. He was born in Bastrop County, Texas, July 4, 1876, and spent his boyhood near Taylor, in Williamson County. He graduated from the law department of the University of Texas in 1901, immediately taking up the practice of law in Taylor. Shortly thereafter he was elected county judge of Williamson County, a post he filled for four years. In 1913 Judge Lawhon moved to Houston to enter the Southern legal department of The Texas Company, a department which he headed at the time of his death. He is survived by his wife and two sons, Thomas J., Jr., and Griffith.

ROBERT W. KIDD, 55, drilling foreman for Gulf Production Company in the Gulf-McElroy area, West Texas, died at noon February 14 after a brief illness at his home in the above field. He had been employed by Gulf Production Company for the past eight years, and is survived by a wife and three daughters.

EDWIN M. JONES, independent operator of San Antonio, Texas, is expected to return from a trip to South America about February 25.

J. D. HEDLEY, chief geologist for Barnsdall Oil Company in Southwest Texas, returned to San Antonio from Norman, Oklahoma, where he went last week to attend the funeral of his mother, Mrs. J. E. M. Hedley. Mrs. Hedley died in Kansas City early in the week while returning from a visit with relatives in California. Burial was at Norman.

H. A. STEELE, zone agent for southwestern Oklahoma for Prairie Oil & Gas Company, has been temporarily transferred from Lawton to the western Kansas district, which is now the most active portion of the state. J. F. Kuhn of Ardmore, is covering Steele's district.

JOHN M. CRAWFORD, president of the Parkersburg Rig & Reel Company of Parkersburg, West Virginia, was a Tulsa visitor during the past week.

MICKEY SHELDON of New York, officer of Sheldon Machinery Corporation and of Sheldon & Burden, manufacturers of drilling rigs and drilling contractors, respectively, passed through Houston last week from Mexico, where he had been inspecting performance of a Diesel drilling rig on a wildcat located 15 miles southwest of Reynosa, Tamaulipas.

J. S. DEWAR, vice-president in charge of production for Phillips Petroleum Company, announced his resignation February 10 to take effect March 1. Dewar is the second oldest employee of the company in point of service, having joined the organization as an accountant in 1917. He will be succeeded by C. P. Dimmit, who recently came to the company through a merger with Independent Oil & Gas Company. Mr. Dewar will enter business for himself.

# Oklahoma--Kansas Field Notes

**FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma***

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## Revise Rules for Oklahoma City Drilling; Want Collins Umpire

Oklahoma City.—Three new rules regarding production in the Oklahoma City pool were promulgated in an order issued by the corporation commission late Tuesday afternoon. The changes came through recommendation of a committee of engineers named several weeks ago to study conditions in the field. The changes may be summarized as follows:

1. Providing that no well shall be drilled in the Wilcox sand area to a depth greater than 5330 feet below sea level without special permission of the corporation commission.

2. Providing that production from any well making more than 10,000 cubic feet of gas per barrel of oil may at the option of the owner be transferred ratably to the other wells on the property and the high gas-oil ratio well shut in, although by such option the producer may have advantage of the potential of such high gas-oil ratio well.

3. Provides that the eight-hour initial flow for potential rating may be converted to a percentage basis and made up in that way instead of by the time basis heretofore used.

Rumors which have been prevalent for the past few weeks were substantiated Tuesday when 27 independent operators and producers petitioned the corporation commission to dismiss the committee of three umpires and appoint Ray M. Collins state proration umpire and pipe line umpire for the Oklahoma City pool to handle all proration affairs for that pool. The present committee is composed of W. N. Stokes of the T. B. Slick interests, chairman; C. O. Rison, Indian Territory Illuminating Oil Company, and B. G. Patton of the Plains Petroleum Company. Significance was placed on the fact that Patton was one of the 27 operators who signed the petition. Appointment of Collins likely would result in the transfer of his office or a portion of it from Tulsa to Oklahoma City.

## Minor Drilling Booms In Seminole District

Tulsa.—Failure of operators in the Seminole district to make new starts as rapidly as completions has resulted in several minor drilling booms during the past few weeks, with no one area holding the lead for more than a short time.

The Fish pool in 7n-8e, Hughes County, came into prominence late in 1931 to be displaced shortly when nine active tests were gotten under way in the Carr City pool. Activity in both of these areas has subsided and the latest to step to the forefront is the Conservation pool located in northern Pontotoc County, in the extreme southern portion of the Seminole district.

The area was discovered in 1927 by the late T. B. Slick, but it has been inactive for the past two years. Recent discovery of a fourth producing horizon has made the area even more attractive and there are now three active tests, three rigging up or ready to start, two digging cellars, and one location.

Edna Marie Oil Company's Walker 1, SW SE NW Section 22-5n-6e, was drilling plugs and cleaning out after cementing six-inch casing at 1575 feet, with total depth at 1710 feet. This is the test which recently discovered the fourth producing horizon.

Mid-Continent Petroleum Corporation's Woodford 1, NE NW SE Section 9-7n-8e, has been brought under control by killing with mud, and is now shut in, estimated at 30 million cubic feet of gas from a total depth of 2937 feet. Operators lost tools week before last, and while fishing was under way the well blew itself in, throwing the tools through the crown block, but doing no serious damage. It will be drilled deeper when the repair work is completed.

Old areas were receiving some attention during the week when locations were announced by Barnes and Taylor for their J. Brunner 1, SW SE SW Section 29-10n-6e, west of the old Searight pool which is second oldest of the Greater Seminole district.

Oils Incorporated's Horn 1, a location in the southwest corner of Section 13-6n-3e, approximately two miles southwest of the town of Sacred Heart and directly east of Asher in Pottawatomie County and Barnsdall Oil Corporation et al's Gray 1, a semi-wildcat in the northeast corner of the southwest quarter of Section 25-6n-4e, 4½ miles west of the town of Konawa.

Announcement was made of a joint test by the Carter and Pure Oil Companies at Tucker 1, in the southeast corner of Section 34-7n-4e, west offset to the Carter Oil Company's Monnette 1 which recently discovered the Sacred Heart pool. Announcement of the location came as a surprise since it was generally understood that the offset owners had entered into an agreement to restrict drilling in that area until more favorable times.

## Oklahoma City Has Four New Operations on Active List

Oklahoma City.—Activity in the Oklahoma City pool had a slight pick-up during the past week when four new locations brought the total number of operations to 56. Of this number 28 were active, seven shut down indefinitely, eight rigs, and 13 locations and cellars. Two wells were completed during the week, making a total of 873 completions since discovery of the pool. Production during the 24-hour period ending Saturday morning at 7 a. m. was 89,424 barrels from 141 wells, 105 of which were flowing natural, 32 were on gas lift, two pumping, and two swabbing. Slick-Urschel, Incorporated, with nine wells, had a total production for the day of 4765 barrels. Phillips Petroleum Company, with nine wells, had 41,524 barrels; Indian Territory Illuminating Oil Company, 43 wells, 13,403 barrels; Sinclair Oil & Gas Company, nine wells, 2173 barrels; and Wirt Franklin Petroleum Corporation, 10 wells, 3121 barrels, making a total of 64,986 barrels from 80 of the 141 wells on production during the period.

Phillips Petroleum Company's Everest 1, CN½ SW NW SE Section 15-11n-3w, flowed 4809 barrels in four hours through a four-inch choke and applying a back pressure of 350 pounds. Total depth is 6540 feet in Wilcox sand. Westgate Oil Company's Blevins 1, NE SW SW NW Sec-

tion 10-11n-3w, produced 2985 barrels in four hours with gas at an estimated rate of 15,000,000 cubic feet. Production is coming from Wilcox sand logged at 6422 to 6538 feet.

Sinclair Oil & Gas Company's Vencl 14, NE SE SE Section 31-11n-2w, old Wilcox sand producer in the southern portion of the pool, was flowing about 30 barrels an hour with four-inch tools lost in the hole. The company has had considerable difficulty with the reconditioning of this well, having had an unsuccessful fishing job which necessitated whipstocking out of the 6⅝-inch casing. After setting 4¾-inch casing the tools were lost in a hole full of fluid. It was decided to swab down so that fishing operations could be carried on with more facility. Eighteen hours of swabbing produced 1874 barrels, an unexpected performance considering condition of the hole. Total depth 6474 feet in the lower Simpson.

Phillips Petroleum Company's Gallman 1, NE Section 3-11n-3w, produced 8253 barrels in three hours but failed to complete its full eight-hour potential gauge. Gas is estimated at 68,000,000 cubic feet.

Two wells were added to the list of wells producing more than three per cent water during the week when Prairie, Slick and Phillips' Sigmon 6, NE SW SW Section 32-11n-2w, and Cromwell-Franklin and I. T. I. O.'s Adeline Billen 1, NE SE NE Section 26-11n-3w, reported water for the first time. Both are edge wells producing from the Simpson below Wilcox.

## Western Kansas Producers In Process of Completion

Wichita.—Two new producers were added in the Barton-Ellsworth Arch area of central western Kansas but both probably will receive further attention before being officially completed. Robertson et al's Stratman 1, SE SW NE Section 1-17s-10w, was pumping 70 barrels of oil per hour from Arbuckle limestone logged from 3267 to 3277 feet. Derby Oil Company's Stratman 1, NEc NW NE Section 12-17s-10w, was swabbing about nine barrels per hour from 30 feet of Arbuckle limestone topped at 3253 feet. Both tests probably will be deepened.

The Isern pool in southeastern Barton County, has its first dry hole with the failure of Midwest Exploration Company's Berscheidt 1, C NW SE Section 12-20s-11w, to find production in the Arbuckle limestone. It has a hole full of water at 3345 feet and probably will be abandoned since no important showings were encountered above the lime. Although located in the same quarter section with the discovery well, it is apparently below the oil water contact may indicate that the main portion of the pool lies north of the discovery well. Some geologists are inclined to believe the discovery well is merely an extension of the Schurr-Raymond pool.

### South of McPherson

Two locations were staked in the new pool one and one-half miles from the town of McPherson during the week. Mid-Kansas Oil & Gas Company made location for Nirdgens 1, NE NW SW Section 2-20s-3w, five locations south of the discovery well and Shell Petroleum Corporation announced location for Helstrom 1, SW SW NE Section 35-19s-3w, approximately three-fourths of a mile northeast of the discovery. Shell Petroleum Corporation's Johnson 1, SE SW SW Section 35-19s-3w, the discovery well, was completed for 13,000,000 gas and about 400 barrels of oil in the chat horizon at 2984 to 3046 feet. Both of the new tests will be important since they will try for production trending in two directions from the discovery. The initial well is located favorably on a structure which was proven many months ago by the core drill.

### Ritz-Decker-Garrett

Twin Drilling Company et al's Farver 1, SW SW SE Section 16-20s-1w, wildcat test located about two miles south of the Canton gas field, topped the chat horizon at 2928 feet and set eight-inch casing at 2930 feet. It was cleaning out with a show of gas at the total depth of 2930 feet. Completion of this test as a commercial producer would mean either the discovery of a new pool or a long extension to the structure which is now yielding principally gas in the area just west of and in the Canton townsite. P. J. Breslin et al's Flook 1, NE NE NW Section 35-19s-2w, one-half mile west of production in the Ritz pool, topped the chat horizon at 2905 feet and at 2952 feet, was making 7,500,000 feet of gas with a spray of oil. It will be drilled deeper.

### Voshell Extended

Western Gasoline Corporation and Shell Petroleum Corporation were preparing to pump Wall 1, NW SW SE Section 21-21s-3w, 1½-mile southwest extension to the Voshell pool in McPherson County. The chat horizon was logged from 3087 to 3130 feet, from which the well is estimated to be capable of producing about 150 barrels per day.

### Winfield Townsite

McNabb et al were running tubing after swabbing 800 barrels the first 24 hours from Hutto 1, Lot 10, Block 18, Reynolds College Addition, Section 22-32s-4e, in the old Winfield Townsite area. Arbuckle limestone was logged from 3297 to 3307 feet. Roth and Faurot made location for their D. Cavitt 1, Lot 4, Block 17, of the same addition. Development now under way in this area is the result of a deepening campaign started a few months ago. Old gas wells which have produced from around 2900 feet are being deepened to Arbuckle limestone and converted into oil wells and a few of the active tests are new.

### Harvey County

F. Hollow et al's School Land 1, SW SW NE Section 20-22s-3w, has been completed for 114 barrels of oil in five hours. This is an exceedingly interesting discovery well since it is the first to produce from the Hunton limestone in Kansas. It is located about 1½ miles east of production in the Haury pool of northeastern Rena County and about eight miles south and west of the Voshell pool. Hunton formation was logged from 3507 to 3516 feet where it flowed 36 barrels in 25 minutes a few weeks ago. The well is located on a one acre tract owned by the Memmonite Church. It is reported that the operator does not own offset acreage but is the owner of considerable royalty around the well.

### South of Wichita

Scroggins et al are shut down with a hole full of water 32 feet in the chat horizon in Wall 1, SE SW NE Section 4-28s-1e, wildcat test just south of the city limits of Wichita. Total depth is 3097 feet still in the chat.

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Red Lodge, Mont.—Drilling has started in Ohio Oil Company's wildcat well on the Golden Dome structure, southern Carbon County, Montana, and at last report it was below 1300 feet. Golden Dome is east of the Dry Creek oil field, and the test will do much toward proving the possibilities there for production. The well is on Section 15-7s-22e, and it is known as Kutchinski 1. Rocky Mountain Drilling Company has contract for rotary drilling.

# News From California Fields

**BRAD MILLS,** ***Staff Representative, Los Angeles, California***

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## Kettleman Development Practically At Standstill Because of Proration

Coalinga, Calif.—The outcome of two important Kettleman Hills tests, one on the North Dome and one on the Middle Dome, is still very doubtful, and mechanical troubles must be overcome before further tests can be made. Adherence to the curtailment plan has reduced drilling to a minimum, and it is obviously useless to complete wells at great cost and shut them in or reduce the flow to a fraction of the maximum.

North American Oil Consolidated has recovered the drill pipe to 8475 feet, barely 10 feet above the shoe of the 9⅝-inch casing, and will make an effort to loosen the remaining drill pipe which was first frozen at 8800 feet. If the lower portion of the string can not be jarred out, it will be washed over. This has been a very tedious fishing job and came when a thorough test of the Temblor on the flank of the structure was being made. Failure to find heavy oil was unfavorable, but there is still a chance to obtain production.

Petroleum Securities Company is milling on the lower portion of the 5¾-inch flow string in Burbank 1, Middle Dome test which is admittedly in bad mechanical condition. Doubt as to the condition of the 8⅝-inch shutoff string has been expressed and completion of this very important well may not be accomplished for some time. The test was drilled to 9332 feet and plugged back to 9208 feet for a production test.

Bolsa Chica Oil Corporation will make a production test in Ferguson 1 at 7768 feet, but it may be necessary to deepen this well. Located on the flank of the structure, the test does not seem so deep as it did a year ago. Much deeper developments on other edge leases lends some encouragement to this well. The government has been lenient and recognized the discovery below 7000 feet, but there is some question as to the identity of the present formation. The nine-inch shutoff string was cemented at 7275 feet.

North American Oil Consolidated cemented a string of 6⅝-inch casing at 8353 feet in Elsinore 1, an offset to Shell Oil Company's Dixon 1 on the North Dome, and is now drilling around 8800 feet. This well should make a producer and may become the deepest commercial well in the world.

Standard Oil Company of California is drilling slowly ahead around 7300 feet in No. 6-29V, Middle Dome test which offsets Petroleum Securities Company's Burbank 1, and may get first production in this part of the field. Progress has been very slow, due to caving formations.

## Tulare Lake Basin Region Is Dry Gas Development Prospect

Bakersfield, Calif.—The fringes of the Tulare Lake basin may witness an increase in drilling activities, due to the desire to develop a larger supply of natural gas in a district easily accessible to both Los Angeles and San Francisco. Possibilities are perhaps limited, but a few good dry gas wells have been completed in this district. Little attention was paid to the first gas wells, but the area now holds much promise. The gas developed has a good heat value and is more desirable in many ways than a wet gas. Eagle Oil & Gas Company's No. 1, Section 15-23-20, located on the lake shore, recently blew in flowing around 20,000,000 cubic feet of dry gas from 1125 feet. Dudley Ridge Oil Company completed a good gas well in the same district a year ago. The value of a good gas flow is now greater than a medium size oil well, and the gas supply of the future appears none too stable in some sections. The dry gas produced over a wide area meets most specifications for fuel requirements.

## Resumption of Operations At Gato Ridge Postponed

Santa Maria, Calif.—Barnsdall Oil Company and Rio Grande Oil Company will make a 30-day flow test of Tognazzini 1, discovery well in the new Gato Ridge field, but do not contemplate a full resumption of operations in the field. Leaseholders have never been satisfied with the short test given the well at the time of completion a year ago and have insisted that a longer test be made to determine the true potential. The well was rated above 1000 barrels after the 10-day flow test. The Gato Ridge field appears more important from an economic standpoint than might be expected of a field producing such heavy oil. This crude cracks readily and the more modern refinery will use it to advantage. The gasoline content on a straight run basis is low, but the anti-knock quality of this type of crude is excellent. The shallow depth at which production is obtained in the field indicates that a good output could be developed on short notice.

## Wildcat North of Torrance Reports Good Oil-Gas Show

Los Angeles.—Mohawk Petroleum Company has at last encountered a good oil and gas showing in Pavey 1, a wildcat test north of the Torrance field, the cores taken from between 5930 feet and 5960 feet having shown good cuts. Failure to find showings above 5000 feet was a distinct disappointment in a well which was located after much preliminary work, and in a district where the average wildcat had encountered good showings. The anticline lies between the Lawndale and Torrance fields and is being drilled on the theory that an accumulation has taken place along the fold.

## Final Test of Deep Edge Well At Inglewood Not Yet Completed

Los Angeles.—Baldwin Hills Syndicate deepened Sentous 1, edge test in the Inglewood field, to 4109 feet, but it is not yet possible to determine whether the formation contains water. The cores show oil, but there is possibility that water is present. Excellent oil sand was cored below 4000 feet and a formation tester was run without definite results. The well is still a shallow test, and more hole may be made.

Allison Syndicate has been testing Moynier-1 at 6015 feet, but it was necessary to plug back in an effort to shut off

water. The liner was cemented through perforations at 6015 feet, but in drilling out, too much hole was opened and water came in through the perforations.

The Inglewood field is probably one of the best undeveloped deep reservoirs in California, and failure to develop inside leases below the main producing zone does not lessen its possibilities. The few edge tests now under way have been prompted by the knowledge that the deeper zones will be productive in the main field.

## Cat Canyon Area Has Only Few Scattered Tests Active

Santa Maria, Calif.—A few scattered tests near the Cat Canyon field are still active, but on the whole this heavy oil district has become very quiet. O. C. Field Gasoline Company has resumed operations in Norswing 1, Section 9-9-33, in the Cat Canyon district, but there is doubt as to the outcome of the production test. This well was drilled to 5568 feet and will be plugged back to 5150 feet for a test of showings logged during drilling. Abandonment will follow an unsuccessful test of these upper showings. Western Gulf Oil Company drilled to 8566 feet in Bradley 1, Section 5-9-33, but failed to find a zone which offered commercial production. Several streaks of oil sand were cored, but the showings fell short of expectations. Heavy oil has been produced in the general district for a generation, and the advent of cracking may stimulate activity when conditions improve. Several small fields in the area are now producing much less than their maximum output under better conditions.

## Refining Method Change Helps Fruitvale's Economic Outlook

Bakersfield, Calif.—Starting of additional wells in the Fruitvale field does not mean that an extensive drilling campaign will be carried out in the extension which holds some promise, but it may lead to steady development of a few leases which were quitclaimed at one time. Mohawk Petroleum Company is completing No. 8 at 3800 feet, but more hole will be made below the final shut-off at 3790 feet. Bankline Oil Company will start a second well in the field, having located No. B-2 on Section 21-29-27 as an offset to Mohawk Petroleum Company's No. 9. Fruitvale crude contains a very small percentage of gasoline on a straight run basis, but it cracks fairly well and also makes a good fuel oil. The field was not regarded as an economic factor at the time of its discovery, but the change in refinery methods has been an aid. Doyle Petroleum Corporation has contracted to sell its crude to General Petroleum Corporation, but the output involved is not large.

## Midway-Sunset-Maricopa Area Sees Better Demand in Future

Taft, Calif.—Operators in the Midway-Sunset-Maricopa district have been especially hit by conditions, but some of the more optimistic are of the opinion that this vast area will again be active when a better demand for crude is noted. Much of the heavy crude produced in this district has been used for fuel oil, but the increase in cracking operations should effect the output in the future. The gasoline content of the average crude produced over the wide area is not high, when gauged by the straight run analysis, but the oil makes an excellent cracking stock. The decline of some of the flush fields should result in a resumption of operations in a district famous for its settled production.

# ▼ NEW MEXICO-ROCKY MOUNTAIN AREA ▼

## Geary Dome Test Pierces Six Possible Sands for Failure

Casper, Wyo.—Midwest Refining Company's deep test on the Geary dome structure, 12 miles east of Casper, has proved a disappointment and is being abandoned in the Lakota sand, which was dry, at 6210 feet. The well found the Muddy at 6092-6105 feet; it was non-porous and dry. The Dakota sand was topped at 6155 feet and was 20 feet in thickness. It carried 500 barrels of water per day. The Lakota was topped at 6188 feet and when drilled into it produced 5000 barrels of hot water per day. This water has a temperature of 142°F. In all, the well penetrated six possible producing sands: Shannon, First Wall Creek, Second Wall Creek, Muddy, Dakota, and Lakota. No production worthwhile was encountered. There is some discussion of making an attempt to save the Lakota sand water for the use of neighboring ranchers, but no definite decision concerning this is announced.

## Nieber Dome Deep Wildcat Abandoned

Worland, Wyo.—The Ohio Oil Company is abandoning its deep wildcat test on the Nieber dome structure, in Washakie County, north central Wyoming. The well was drilled to 8596 feet, in the Sundance formation which was dry. It was plugged back to the Frontier sand and tested in three strata the last of which was at 7090 feet. No production was found and the well is being plugged to abandon. Whether the company will drill other tests on this structure sometime in the future is not announced.

## Whitlash Oil Producer To Be Deepened in Spring

Shelby, Mont.—The discovery oil well in the Whitlash field, lying partly in Alberta and partly in northern Liberty County, Montana, is last reported to be producing about 20 barrels per day average. It is to be produced until spring, when, if the average has declined to around 10 barrels per day,—as seems likely,—the well will be drilled deeper to the Sunburst sand, which was the original objective and which may produce either oil or gas. The well belongs to Western Natural Gas Company which supplies Great Falls with its fuel needs, and the company started it originally as a test for gas to augment its supply.

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Shelby, Mont.—The California Company's wildcat well on the Utopia structure, Ross 1 Section 3-33n-6e, Liberty County, northern Montana, is making good progress. It has cemented casing at 2570 feet and the well is now standing while the cement sets. The 10-inch casing has been carried through the second water sand.

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Osage, Wyo.—A new town, to be known as Oil City, is to be started in the heart of the Osage field, eastern Wyoming. Incorporation papers have been filed and work of building sanitary sewer system, community hall, post office, telephone exchange, hotel, garage and machine shop, general store, and lumber yard is to start immediately. The community will enjoy electric lights, pure artesian water, and natural gas.

# East Central Texas Field Notes

**H. H. KING,** ***Staff Representative, Fort Worth, Texas***

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## East Texas Field's Productive Territory is Extended 7500 Feet

Tyler, Texas.—The length of the East Texas field's unbroken stretch of productive oil area in a northeast to southwest direction was extended about 7500 feet to the south over the past week-end, thereby giving it a maximum length of about 36 miles.

A large producer was scored by The Texas Company's W. W. Henry 1, located on a 229-acre lease, W. J. Roane Survey, A-680, in giving the field this important extension. The well is credited with having flowed 110 barrels oil per hour through three-quarter-inch choke on 2½-inch tubing from Woodbine sand at 3612-20 feet. This outpost well is about 5500 feet due north of a 17,000,000 cubic foot dry gasser completed recently on the Ras Lacy 100-acre tract, J. H. Sparks Survey.

The breaking off point for the oil zone is now confined between this gasser and the new completion of the Henry farm. The Texas Company's Henry 1 logged gas in the first foot of sand, then registered only moderate oil saturation in the remainder of the sand drilled, with the hole bottomed at a sub-sea depth of 3285 feet. Ras Lacy 1 was drilled by Stanolind Oil & Gas Company and Pure Oil Company into water at a minus depth of 3327 feet, or in sand at 3645-66 feet, registering 450 feet of salt water in one-third hour when a drill stem test was made at 3619-66 feet. The water was cut off when the hole was cemented back to the 3616-foot level, prior to the making of the above initial production test on the gas.

Peyton Brothers et al's Perry 1, which was completed early last month as a much larger dry gasser, is located further east and on a line between the above two wells. The gas wells on the Perry and Lacy tracts will earn more revenue by the sale of gas for fuel to nearby properties than would be possible to earn for a group of oil wells in the same area because of proration restrictions.

Some discussion has taken place as to the feasibility of launching a gas repressuring program in the lower section of the Joiner area as result of the development of this unexpected supply of dry gas.

Two prospective pumpers for the Joiner area were included in the group of recent completions. Bailey & Trimble, operators with headquarters at El Dorado, Arkansas, brought in their E. B. Alford 1, located on a five-acre lease, making five barrels of oil per hour from broken sand at 3614-3700 feet, with lime continuing to 3725 feet. Phillips & Bennett, Tyler operators, completed their E. B. Alford 1, located on a five-acre lease, flowing 10 barrels oil per hour by heads from broken sand and shale at 3611-3705 feet.

W. F. Sorrells of Gilmer, Texas, and associates' A. N. Brawley 1, located on a 16-acre lease on the west end of the M. Mann Survey, Upshur County, was completed flowing by heads from sand at 3743-3745 feet. This light producer drilled near the danger zone for bottom hole water, and is an outpost on the north end of the field.

Contrary to expectations a gain in new locations was reported in the East Texas field despite the fact that the allowable production per well is now a maximum of 75 barrels daily. A survey on new drilling reports 97 locations for the past week as compared to 74 for the week previous. Shell Petroleum Corporation was a heavy contributor to the list of new operations, having authorized 16 new wells during the week and purchased new casing and tubing for the entire batch. The latter concern was operating 14 contractors' rigs and rigging up on seven additional tests late last week, exclusive of the new authorizations. Tidal Oil Company increased its field operations during the past week, with 10 active tests, two rigs, and eight locations.

## Pure and Associates Plan 8000 Foot Test North of Van Oil Field

Tyler, Texas.—Having penetrated the upper section of the Trinity sand section without scoring production, Pure Oil Company and associated unit members in the Van field now plan to make an 8000-foot test of their V. T. Davis 1-T, located north of the field proper. This deep test was carried to 6795 feet last week, with the hole bottomed in red sandy shale, and a string of seven-inch pipe was cemented at 6781 feet to case off 3029 feet of open hole. This open hole offered an extra hazard in the form of junk sidetracked at the 3900-foot level, as there was danger of this section of drill pipe and a core barrel falling back into the hole. The red sandy-shale formation was encountered near the 6770-foot level.

Pure Oil Company's D. F. Cade 1, located a short distance northwest of the above deep test and also outside the productive limits of the Woodbine sand horizon, failed to develop oil production in commercial quantities after a series of tests in the Nacatosh sand horizon. Cade 1 was drilling in shale below 1300 feet early this week, with 10¾-inch casing cemented at 1151 feet. Oil saturation appeared in cores taken between 740 and 1149 feet, but a drill stem test with an Edwards sand tester at 562 feet failed to develop live oil, while only mud and drilling fluid resulted from a swabbing test through 2½-inch tubing set at 1145 feet. However, a show of gas was reported in the latter try for production.

Development of production from the Nacatosh sand would

## East Texas Production

Official data on proration enforcement in the East Texas field, as compiled each day by the military authorities, is listed below for the past week:

| Period ending 7 a.m. | | Total wells completed | Wells reporting prod. | Wells off prod. | Wells not reporting | Pipe line runs | Total production | Daily avg. per well |
|---|---|---|---|---|---|---|---|---|
| February | 8 | 4077 | 984 | 2867 | 224 | 24,046 | 71,995* | 73.1 |
| February | 9 | 4089 | 3913 | 47 | 129 | 280,232 | 300,578 | |
| February | 10 | 4101 | 3799 | 36 | 266 | 344,584 | 288,709 | 76.6 |
| February | 11 | 4120 | 4061 | 44 | 15 | 330,187 | 305,126 | 75. |
| February | 12 | 4132 | 4069 | 40 | 23 | 280,250 | 305,348 | 75. |
| February | 13 | 4142 | 3968 | 28 | 146 | 314,852 | 298,738 | 75.3 |
| February | 14 | 4152 | 3879 | 36 | 237 | ..... | 290,310 | 74.3 |
| February | 15 | 4160 | 1115 | 2875 | 170 | 28,807 | 82,888* | 74.3 |

*Production off because of Sunday shut-down.

NOTE—Pipe line runs include receipts plus crude used as fuel and road oil and for washing in wells.

enable Van field unit members to perpetuate the leases on a number of tracts soon to expire that are considered barren of production in the Woodbine. Considerable importance is attached to the final outcome of Cade 1 for this reason.

Van field has eight rigs in operation, including those used on the above deep and shallow tests, and derricks are in place for three others.

## Trading Price of East Texas Acreage Reflects Curtailment

Longview, Texas.—Property values in the East Texas field have been adversely affected by the curbing of production at intervals in recent months to the current low level of 75 barrels daily allowable per well. Each cut in the production quota per well automatically lengthens the payout period required by a well to return initial investment costs, and for this reason it is generally believed that a peak level has been passed, temporarily at least, on lease and royalty values in this field. A number of property trades made public last week, including one tract involving some of the best wells in the field, indicate that a noticeable shrinkage in values has occurred lately, especially on cash transactions.

Only a small percentage of the current deals involve cash lease bonuses, but payment is usually made from one-fourth of the production. This field is one of the few flush areas in the country that any operator with the necessary means of getting a 3650-foot hole drilled can acquire proven leases, or at least substantial interest, without paying cash lease bonuses. On the other hand, operators that have adequate working capitol are finding it more attractive to play other areas that are not so hard pressed by proration restrictions. Such a view has been taken lately by a number of operators in Louisiana and Arkansas, while the Southwest Texas district is receiving considerable trading through lease purchase appropriations that have been diverted from the East Texas area by both Texas and Oklahoma concerns.

Texas Pacific Coal & Oil Company has turned its 182-acre fee tract in upper Gregg County along with three completed wells to Kewanee Oil & Gas Company, Philadelphia and Tulsa, for a reported cash consideration of $515,000.00. The usual one-eighth royalty was retained by Texas Pacific Coal & Oil Company on this fee land, which was acquired more than a score of years ago for timber rights. The property commanded a lease price of $2500.00 per acre, while the purchaser repaid the cost of the completed wells at rate of $20,000 each. In acquiring this property Kewanee Oil & Gas Company will be forced to drill a few more wells to match offsets.

J. G. Beard of Ardmore, Oklahoma, and associates have contracted to drill two wells immediately in acquiring lease on the J. M. Farrell 43-acre tract, D. Sanches Survey, Gregg County, frfom Roeser-Pendleton, Inc., for a lease bonus of $2000 per acre, payable from three-eighths of the first production. This property is on the extreme east edge of the Longview area, but offsets successful completions.

E. L. Smith Oil Company is reported to have purchased Harry W. Elliott et al's J. W. Harrison 15-acre lease, G. W. Hooper Survey, and a semi-completed well for a cash consideration of $42,500. The latter is to complete the well free for the new owners as part of the purchase consideration. D. M. Lide and associates assumed a $100,000 oil payment obligation, and contracted to drill one well immediately for lease on J. K. Wadley et al's A. H. Tubbs 50-acres, D. Sanches Survey, located on the east edge of the field. It is reported that three-fourths of the above consideration will be payable from three-eighths of the first production, and the remaining $25,000 payable from one-fourth of the remaining production. McAlester Coal & Fuel Company of McAlester, Oklahoma, paid $14,000 cash for lease on 4.9 acres out of the J. M. Christian 17-acre tract, G. W. Hooper Survey, Gregg County. The above company has several operating subsidiaries in the East Texas area.

## Salt Water Inspectors Keep Down Field Damage Claims

***TYLER, Texas.—Surface damage and stream pollution suits, resulting from waste oil and other by-products of the usual oil field, have been obnormally few in the East Texas field through the efforts of a trio of inspectors retained by the East Texas Salt Water Committee. Approximately $1,000.00 is spent each month in maintaining the field staff, which is headed by Geo. E. Martin. Less than a dozen of the property owners are contributing funds to support this anti-pollution crew, but every well owner indirectly is benefited by its activities. Martin and his associates are constantly on the alert for fire hazards appearing in the field, and have been successful in shielding many well owners from damage suits for alleged soil and stream pollution through insisting that the trouble source be removed.***

***The East Texas Salt Water Committee was organized last June to start preliminary work on an organization that would eventually gather and dispose of salt water in the field on a community basis. Don R. Gladney, manager, right-of-way department for Magnolia Pipe Line Company, Dallas, is chairman of the body. Gladney will announce a meeting to be held shortly to set up a permanent organization, but in all probability the water disposal system will be deferred, as the current output of salt water in the field is negligible under the reduced proration allowance per well.***

## Survey Shows North Texas Output About 80 Per Cent of Potential

Wichita Falls, Texas.—Revised proration figures on the North Texas district reveals a total of 14,736 completed oil wells rated at a combined potential output of 64,021 barrels daily, according to a survey prepared by J. T. Elliott, deputy supervisor of the oil and gas division of the Texas Railroad Commission and also district umpire.

Allowable production for the district is placed at 52,024 barrels daily, but production actually is running about 5000 barrels less because of some properties being unable to produce the allotted quota, while there are some instances where property owners in isolated areas have been unable to obtain pipe line connections and a market outlet.

The North Texas district is by far the most thickly populated with wells in the state; it has the lowest average production per well, as the above figures indicate. The Central West Texas district, adjoining on the south, is second in rank on number of oil wells, having approximately 8450, with a daily potential of about 38,500 barrels, and an allowable of 30,000 barrels daily. O. H. Burkett, deputy supervisor, is umpire of this district. There are approximately 4300 producing oil leases in the above two districts.

The sixth successful completion in the 2200-foot Canyon horizon was made in the Chalk Hill pool, Archer County, last week when Deep Rock Oil Development Company and

Lindsey Drilling Company's L. F. Wilson 2, lse. 1, flowed 715 barrels of 42 gravity oil daily through 6⅝-inch casing from regular sandy-lime formation at 2207-2220 feet. A stringer of dry sandy-lime separated the oil horizon into two parts at 2211-12 feet. A string of tubing has been ordered installed, with a better flowing performance inticipated. The owners of this well have skidded the rotary one location to the southwest for a third test on the 80-acre lease. The Chalk Hill deep oil horizon was uncovered by the above two companies last March with a 750-barrel well, and so far all production has been confined to the discovery block, while dry holes were the only rewards gained by numerous operators that have explored nearby leases for production in the Canyon.

## Winkler County Wildcat Provides Possibility of New Field in Area

San Angelo, Texas.—Promise of a new oil area for the lower portion of Winkler County was obtained through Sid Richardson and others' wildcat on the S. M. Halley land having developed a half million cubic feet flow of gas with show of oil in lime at 2810 feet, of 170 feet in the lime horizon.

This test is located 330 feet from the south and 1650 feet from the east lines of Section 25, block "B-12," and on a line between the O'Brien pool, Ward County, and the Hendrick field, Winkler County. A few commercial wells forming a pool to the west probably belong to this same general production trend, but are isolated from the Halley wildcat by a quartet of dry holes. Tools were lodged in the Halley test in picking up the gas show.

Richardson et al's John Sealy 1, located in the southwest corner of Section 92, block "A," G. & M. M. B. & A. Survey, and southeast of the above test, encountered 1500 feet of sulphur water in the lime at 3245 feet. The hole was carried to 3300 feet, where it will probably be abandoned. This failure is on the east flank, and the other wildcat is on the north flank of a large solid block of leases held by Gulf Production Company.

Progress on Weekly Oil Corporation et al's wildcat test on the E. F. Cowden ranch, Ector County, has been delayed by another fishing job. Cable tools were re-installed at 3940 feet after apparently drilling by troublesome gas at 3785-3800 feet. Tools were used in drilling out a bridge formed at the 3750-foot level, and the head of gas that was released by the penetration on the bridge caused the drilling line to snap.

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San Angelo, Texas.—Texas Pacific Coal & Oil Company has sold approximately 100,000 barrels of crude stocks held in its large tanks near McCamey to the Shell Petroleum Corporation. The latter has begun emptying the tanks, and will pay the prevailing market price in effect each day runs are made. This storage oil was accumulated during the period that market relief could not be obtained and also during the extremely low priced period last year.

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Marshall, Texas.—Natural Gas Products Company tested one million cubic feet of gas in a drill stem test at 3234-3260 feet last week in Mayes 3, Jane Tharp Survey, Panola County, in the Bethany gas field, and later was reaming out the hole, preparatory to setting casing.

Only two East Texas border county wildcat tests were active during the week. Baunauch Development Company was coring chalk at 2700 feet in Miller 1, Henry Fulgram Survey, Marion County, and E. L. Chapman's Holt 2, Matthew Moore Survey, Shelby County, was drilling shale at 2200 feet.

## Hobbs Field Scheduled to Get 3000-Barrel Production Increase

Hobbs, New Mexico.—A production increase of about 3,000 barrels daily was scheduled to be alloted the Hobbs field beginning with the February 16-29 proration period as result of Shell Petroleum Corporation's having boosted its nominations from 10,000 to 15,000 barrels daily. The field has been averaging 31,876 barrels daily during the past month from 149 wells.

Withdrawal of Tidal Refining Company as a purchaser in the field effective with the new period will partially offset the increased takings by the above company. Shell Petroleum Corporation will absorb Tidal Oil Company's connections and equally distribute the over-all increase given the field on a ratable basis.

Midwest Refining Company's State 11, located on the east side of the Hobbs field and 660 feet from the north and 1980 feet from the west lines of Section 4-19s-38e, was completed late last week from regular lime at 4025-4175 feet. This well flows through open tubing at the rate of 6,318 barrels of oil and 4,820,000 cubic feet of gas daily. When given an open flow gauge through casing the potential jumped to 17,376 barrels fluid, 15 per cent drilling mud and water, and 14,500,000 cubic feet gas. The net oil flow on the gauge was 14,761 barrels daily.

Continental Oil Company's State 6-A, a north offset to the above producer, has cemented 9⅝-inch casing with 600 sacks cement at 2754 feet.

## Two Most Western Pettus Wells Make 2424 Barrels

San Antonio, Texas.—Two more producers in the southwestern portion of the Pettus field, Bee County, accounted for 2424 barrels initial production. The wells offset each other and are the most extreme west producers in the field.

The Texas Company's Gremmel 3, in the John Pace Survey, is flowing 1560 barrels from 3880-90 feet, McMurray et al's (formerly H. H. Weinert) Ray 1, John A. Williamson Survey, is making 864 barrels from 3894-3900 feet.

T. B. Slick Estate's Ray 4, in the George A. Kerr Survey, north offset to Houston Oil Company's Portis 3, is drilling at 3220 feet, while Ray 5, one location east of Ray 3, has been spudded. The Texas Company is preparing to move onto Gremmel 4, most westerly location in the field. Buck Oil Corporation is drilling at 1020 feet in its Ray 3, south of The Texas Company's Gremmel 2 and 3 producers. J. M. Davis et al's George A. Ray 1, John Williamson Survey, 1000 feet southeast of the pool's discovery well, is drilling around 3400 feet. Mauldin et al's Fee 1, between the extension pool and the townsite, will spud in the near future.

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San Antonio, Texas.—Two active wells are being drilled in the vicinity of the field discovered in Caldwell County, three miles north and west of Luling, last summer. T. W. Cole's J. M. Pierce 1, in the Solomon Seal Survey, north of the pool, is drilling at 750 feet, while the Meyer Exploration Company's Walker 1, in the same survey is down 170 feet.

Detroit Texas Development Company's (M. O. Rayor) Dunlop 2, in the same survey, is still shut down at 2503 feet. It is said that this well will be plugged back a few feet.

# South Texas Field Developments

EARL POST, *Staff Representative, San Antonio, Texas*

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## Important Hidalgo County Tests Active; Shallow Well in Starr

San Antonio, Texas.—La Joya Oil & Gas Company's W. L. Hart 1, located six miles west of Mission and near Sam Fordyce in Hidalgo County, was coring at 4239 feet. This well is on a 14,000-acre block held by a group of Rio Grande Valley business men and is near the pool opened last year by Dayle L. Smith Oil Company when Fernandez 5, Porcion 75, blew in wild at 4026 feet. It sprayed considerable salt water and lots of gas, but was finally closed in.

Dayle L. Smith's Daskman 3, 900 feet west of the Fernandez well is drilling at 760 feet.

Several other important tests are being drilled in Hildago County. B. H. Adams (Barrett and Kanellos) are coring J. D. Brock 1, block 15, Porcion 79, 15 miles northwest of Mission, at 2713 feet. San Roman Oil Company's (Taylor) Lomax 1, share 15, has resumed drilling after setting 486 feet of 12½-inch casing.

In the adjoining county, Starr, one producer was reported during the week. It was Davis et al's Kelsey-Bass 1, Survey 6, Los Olmos pool, making 15 barrels from 484 feet.

## Kerr County Discovery Well To go Deeper, Start New Test

San Antonio, Texas.—Evans & Gant have made a location for Jeff Love 3, just east of Love 1 and in Survey 1594, Kerr County. It will be drilled immediately.

Jeff Love 2, Survey 1593, which has been standing several weeks at 5894 feet, is to be drilled deeper. It is generally accepted that this well's recently interesting showing at this depth was in the Mississippian. It is hoped to carry this test to the Ellenberger lime of the lower Ordivician series.

## Two Completed at Refugio; Test Starts for Deep Sand

San Antonio, Texas.—Two producers, one of which was a workover, were completed in the Refugio field during the week. In addition, another deep test, which will go to the 6450-foot sand, or deeper, was started.

Both producers were by Larcro Gas & Petroleum Company. Holmes Heard 1, a work-over, has been deepened from 3643 feet, where it was a gasser, to 3685 feet, and is spraying about 10 barrels of oil. It is showing 475 pounds pressure on the tubing and 600 pounds on the casing through one-fourth-inch chokes.

Strauch 4, on lot 6, is having a standard rig installed preparatory to pumping. Casing is set at 3675 feet with the top of the sand at 3677 feet. The total depth is 3692 feet. Fifteen feet of screen was set. The well is estimated at better than 100 barrels.

Edwin M. Jones pulled the liner in Josephine Mitchell 1-B, in the northeast corner of the Mitchell 200-acre tract in the Refugio Survey, in the southern portion of the town blocks. Present depth is 5441 feet and the well will be sunk to the 6450-foot level. If it fails to make a good producer at this level, it likely will go much deeper. At 5404 feet, a string of 9⅝-inch casing was set, providing sufficient hole for a real deep test.

## Goliad County Test Resume With Pettus Sand as Objective

San Antonio, Texas.—L. Neal et al's J. M. Pettus 1, in the Pedro Trevino Survey, several miles west of Goliad, has resumed drilling and at last reports was down 4220 feet. This well is about eight miles southwest of the Charco district being exploited by Stanolind Oil & Gas Company and John F. Camp. It had been shut down several months, and it will be carried to the Pettus sands.

Hoffman & Gooch have taken over the A. T. Fromme 1, drilled to 2302 feet more than a year ago, and will deepen the test to the Pettus horizon, it is announced. This well was originally drilled by Rhemenschneider et al. It is on the Simpson block about 300 feet each way out of the southwest corner of the south 300-acre tract in the Peter Dexter Survey, 10 miles north of Goliad.

## Four Scattered Wells Will Prove Victoria County Area

San Antonio, Texas.—C. B. Bunte and C. R. & M. Drilling Company have made location for Keeran 2, one location east of Keeran 1, in the Martin de Leon Grant, about 10 miles northeast of McFadden, Victoria County. Keeran 1 was completed recently at 5182-91 feet, where it showed for a large gasser spraying 46 gravity oil.

The Texas Company made location for McFadden 4, 2800 feet north of McFadden 3, which showed an initial flow of 700 barrels from 5828-32 feet. It is in the John M. Rine Survey near McFadden (Marianna) in Victoria County.

Across the line in the northern portion of Refugio County, Humble Oil & Refining Company has spudded in O'Conner 2, 933 feet northwest of O'Conner 1. The latter was a producer at 4127-55 feet.

T. B. Slick Estate's McFadden 2, 3500 feet north of McFadden 1, in the J. Barian Survey, is to be drilled immediately. McFadden 1 showed for a large gasser at a total depth of 3509 feet.

All four of these wells are second wells to be drilled in vicinity of discovery tests and will do a great deal to prove up the Victoria-Refugio area.

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San Antonio, Texas.—Another southwest extension is being provided to the Cooksey pool, Bexar County, by Chiquita Oil Company's (Witherspoon) Pieniazek 1, Steel Survey, which is bailing. The well is about 1550 feet deep, the exact footage not announced. It is 1000 feet southwest of Hunter 1, of the same operators, completed several days ago as a producer.

# Gulf Coast Field Developments

**JACK LOGAN, *Staff Representative, Houston, Texas***

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## Activity is Picking Up at Rabb Ridge Field in Fort Bend County

Houston.—With one producer completed, one location abandoned, one well preparing to deepen, one flowing 10 barrels per hour prior to completion, and a derrick going up for a new test, Rabb Ridge field in Fort Bend County, variously known as Thompson, Clear Lake and Lockwood field, is showing definite signs of a drilling revival.

The completion was Gulf Production Company's A. E. Myers 2, in the north end of the proven area, which had an initial production of 2400 barrels of 25 gravity oil through a half-inch choke, which carried an initial pressure of 400 pounds. Total depth of the well was 5240 feet, the last 12 feet of which was heavily saturated oil sand. The formation from 5188 to 5228 feet, however, was also oil bearing. Temperature of oil from Myers 2, which is producing through a three-eighths-inch choke, is 98 degrees.

Cullen and West and Gulf Production Company's George 3, located 1000 feet east of No. 2 in the John Rabb Survey, is flowing 10 barrels per hour from a sand encountered at 3220 feet. Casing, 9⅝-inch diameter, was cemented at 3150 feet. The well has not been completed. The same operators' Lockwood-Sharp 4-A, which never passed the derrick stage, has been reported abandoned.

Gulf Production Company has announced a location for T. R. Booth 1 at Rabb Ridge. A derrick is going up on a site 922 feet from the west and 475 feet from the south line of the John Rabb Survey.

## Announcement of Two Locations Follows Sulphur Dome Completion

Houston.—Union Sulphur Company, which completed a successful producer at Sulphur dome, Calcasieu Parish, Louisiana, this past week, has announced two new locations on fee property in the field.

The week's completion, Fee 722, had an initial yield of 1500 barrels of pipe line oil through a half-inch choke. Total depth of the well was 5432 feet, with the oil sand topped at 5410 feet. One joint of three-inch screen was set in the sand. The oil tested 26.3 gravity, and the pressure on the choke was recorded as 540 pounds.

## Work Started on South and East Offsets to Iowa Discovery Well

Houston.—Shell Petroleum Corporation has started two semi-wildcat offsets to Vacuum Oil Company's Waite 1, discovery well in the Iowa district of Calcasieu.

Heyd 2, being 450 feet south of Waite 1, was the first to spud and has set a string of 13⅜-inch casing at 1165 feet. (The location for Heyd 1 never was drilled.) Heyd 2 is 225 feet each way out of the northeast corner of Section 13-9s-7w, Calcasieu Parish. The second test is O. A. Fontenot 1, located across the line in Jefferson Davis Parish. Fontenot 1 is an east offset to Vacuum Oil Company's well, being 225 feet east and 775 feet north of the southwest corner of Section 7-9s-6w.

In addition to the above, two other wildcats in Calcasieu Parish are being watched for developments. They are: Hill Oil Company's Vincent 1, Section 25-10s-10w, approaching 3000 feet after having set 10-inch casing, and Brownie-Babette Oil Company's R. A. Moore 1, a flank test south of Shell Petroleum Corporation's operations at Black Bayou. This latter test is rigging up.

## Flush Oil From North Flank Of Starks Dome Not Satisfactory

Houston.—Flush production obtained this week from the north flank of Starks dome in Calcasieu Parish, Louisiana, by Gulf Refining Company of Louisiana on its Lutcher Moore lease through completion of No. 29 was not considered satisfactory. When one joint of 4½-inch screen was set at 1137 feet in an oil sand topped at 1118 feet, the well swabbed salt water and then pumped oil at the rate of 20 barrels per day. It was only 18.6 gravity and showed considerable water. The operator has not listed the well as a completion yet, and further efforts to better its yield are likely.

## Heep Spuds Wildcat Test Near Montgomery County Discovery Well

Houston.—Heep Oil Corporation has spudded R. L. Cartwright 1, wildcat well in Montgomery County located a mile and a half east by north of G. W. Strake's South Texas Development Company 1, discovery well of the new Montgomery County oil field, while Peveyhouse Oil Company's Sealey 1, located five miles west and a mile north of the Strake well, at latest reports was drilling near 3250 feet in boulders.

Fuel for drilling Heep Oil Corporation's well will be purchased from Strake's South Texas Development Company 1, which also, incidentally, is furnishing raw material on which Conroe Refining Company is operating.

## Deep Evangeline Field Test Loses 100 Feet While Reaming

Houston.—The loss of 100 feet of hole when reaming to set 5-3/16-inch casing in order to core below 8650 feet in Yount-Lee Oil Company's Housierre Latrelle 10 at Evangeline, Acadia Parish, may result in a second failure this year to obtain record depth production in South Louisiana.

Housierre Latrelle 10, located 5435 feet east and 1070 feet north of the southwest corner of Section 47-9s-2w, entered a hard sand reported to be showing oil at 8650, but was unable to core on account of heaving shale. The hole has been reclaimed back to 8622 feet.

The deep test was spudded early in July, 1931, and set 10-inch that month at 894 feet. The drilling progressed rapidly down to 7778, where an oil sand was topped. Mechanical difficulties made it necessary to sidetrack the old hole at 7464 feet. An attempt to set seven-inch casing above the show was unsuccessful, and the drill continued in the new hole to pick up the above show again at the same depth, and penetrate it to 7858 feet, where 58 feet of five-inch screen was set. The show tested salt water.

## Gulf Starts Seismograph Crew On Big South Mississippi Area

Jackson, Miss.—No new gas wells and no new locations were reported in the Jackson field during the last week but chief interest was centered in a northeast edge test in the Rankin County part of the field, James A. Alexander's Independent Realty 1, SE SE Section 1-5-1e, Rankin County, where six-inch casing was cemented at 2349 feet at top of the chalk. The elevation is 271 feet which gives a sub-sea depth of 2078 feet, making the well considerably high. Two feet of chalk was penetrated and returns lost. Ninety-four feet of black shale was logged above the Midway chalk contact.

Gulf Refining Company, according to reports reaching Jackson, has begun seismograph work on several large tracts of lumber company land in Pearl River and Hancock Counties in southern Mississippi. Several tracts are under option, it is said, for geological and geophysical work to be done, and such acreage as desired from the blocks worked can be leased for development. Much geophysical work has been done by different firms on the coastal area of South Mississippi and South Alabama in recent months.

Magnolia Petroleum Company is paying rentals falling due on the block it secured in Clarke County, central East Mississippi, where Gulf Refining Company's Long-Bell A-1, Section 10-2n-16e, had a show of heavy oil at top of the Eutaw last fall at 3700 feet.

P. J. McAlpine is completing a block of acreage in northeast Mississippi and northwest Alabama, centering around Arkansas Natural Gas Corporation's abandoned Rye 1, Section 22-15s-17w, Monroe County, Mississippi, in which county the Amory gas field with four commercial gassers, is located.

Land men for Ramsey Petroleum Corporation of Oklahoma City are reported getting extensions and new acreage on the Jackson fault in Clarke County, Alabama. It is reported the Ramsey company plans to start a test by May 1, if proper arrangements are made. The Jackson fault is part of the Hatchetigbee anticline. This fault has a displacement of 500 feet on the south end and about 150 feet on the north end.

### CORRECTION

On page 94, January 29, 1932, issue of THE OIL WEEKLY it was stated that the American Society of Mechanical Engineers had held its annual meeting in Tulsa, Monday, January 18, electing Clarel P. Mapes, chairman for 1932. This should have been the Production Division, American Institute of Mining and Metallurgical Engineers, which met on that date and elected Mr. Mapes, chairman; Colin C. Rae, first vice-chairman; Harry H. Wright, second vice-chairman; and I. W. Alchorn, secretary-treasurer.

## Ohio Starts New Test In Dry Creek Field

Red Lodge, Mont.—Ohio Oil Company is to let William Robinson 1, SW Section 5-7s-21e, Dry Creek field, Carbon County, southern Montana, stand for the time being, and is moving in and building rig for William Robinson 2, on SE SE Section 3-7s-21e, east of No. 1, for an offset to the company's Chapman 1, Section 2-7s-21e. The last named is now on production after having been shut in since completion. Its initial production was 886 barrels.

The company's Industrial 2, Section 11-7s-21e, lost circulation in cementing last week, and at last report was waiting for cement to set at 1012 feet before resuming drilling. Caving formation has been responsible for the delay.

# LOUISIANA-ARKANSAS

▼ ▼ ▼

## Zwolle Area Adds Four New Operations for Total of 38

Shreveport, La.—Four new locations were announced for the Zwolle district last week, three being for tests in the southeast part of the field and one being for a western outside test from the recently opened mile southwest extension of the Zwolle townsite part of the field.

The new locations are: Crescent Drilling Company's Byrd 3, NE NW Section 12-7-11, derrick; W. F. Lacey's McNeely 2, SW NE NE Section 14-7-11, offsetting a recent 600-barrel producer, rigging up; W. M. Coats' McNeely 2, NW NE Section 14-7-11, location; and Stovall Drilling Company's Nulton 3, SE NE Section 2-7-13, location.

Coats Petroleum Company's Parie 1, NE SE Section 2-7-13, a half mile southwest of production in the Zwolle townsite southwest offshoot, gauged 375 barrels of oil per day flowing through seven-sixteenths-inch choke with 50 pounds pressure, last week, at 2405 feet in chalk. The well was completed the preceding week.

On Saturday, February 13, there were 38 operations under way in the Zwolle districts including inside tests and wildcats. These operations were divided as follows: six waiting on standard rig; seven locations; six derricks; one rigging up; five drilling; four setting six-inch casing, and nine shut down.

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Shreveport, La.—Loring Oil Company, drilling Bowman-Hicks 18, SW NW Section 15-7-12, Sabine Parish, Zwolle district, after an unsuccessful effort to shut off salt water from 4300 to 4334 feet, sidetracked the old hole which had been taken to 4428 feet, at 4350 feet last week and later was reported drilling in the new hole at 4370 feet. This test topped the lower Cretaceous at 4000 feet; elevation is 264.1 feet. Bottom of the old hole was still in Fredericksburg, positive identification of this formation having been made at 4410 feet.

Five miles north of Zwolle production, R. L. Gay, Trustee's Long-Bell A-1, NW NW Section 10-8-13, which logged Glen Rose at 4220 feet, was drilling shale and lime late last week at 4714 feet.

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Shreveport, La.—H. I. Morgan and associates, after encountering eight feet of sand in the upper Trinity at 1735 feet in Strange 1, NE SW SW Section 23-19-11, their latest upper Trinity zone test, for the southwest flank of the Bellevue structure in Bossier Parish, last week cemented six-inch casing at 1721 feet.

Louisiana Oil & Gas Company, Incorporated, drilling Hammock 1, SE SE Section 32-19-16, Caddo Parish, in the north part of the Greenwood gas field, where last year a gas producer was completed in the Tokio horizon, tested dry in the Nacatosh from 927 to 932 feet in a drill stem test last week, and later was drilling ahead at 1200 feet.

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Shreveport, La.—Frank Foster, Inc., made location last week for Stevens 1, NE NW NW Section 20-9-11, Sabine Parish. This test is on a block of 4080 acres around the discovery well of the Spring Ridge district, between Zwolle and Pleasant Hill fields, which Foster recently took over from Langbridge Oil Corporation. The latter company drilled the discovery well, Stevens 1, Section 17-9-11, and still retains that well and 120 acres upon which it is located. Discovery was made last fall with a flow of 40 barrels of 31.9 gravity oil from 3650 feet.

# Completions for Past Week in U. S. Fields

▼ ▼ ▼

## CALIFORNIA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| DOMINGUEZ— | | |
| Union Oil Co., Callender 23 | 250 | 5122 |
| Shell Oil Co., Reyes 41 | 1750 | 5270 |
| LONG BEACH— | | |
| Hub Pet. Corp., Williamson 1 | 400 | 8517 |
| Onyx Oil Co., No. 2 | 150 | 5575 |

## EASTERN STATES

### PENNSYLVANIA

| | | |
|---|---|---|
| GREENE COUNTY— | | |
| Convex Glass Co., Miller Hrs. 1 | ¶1 | 2470 |
| Equitable Gas Co., Fox 1 | ¶1¼ | 2682 |
| Equitable Gas Co., Wade 1 | ¶ | .... |
| —BRADFORD FIELD— | | |
| Forest Oil Corp., Forest 24 | 2 | .... |
| Forest Oil Corp., Forest 25 | 2 | .... |
| Forest Oil Corp., Forest 26 | 2 | .... |
| Forest Oil Corp., Forest 27 | 2 | .... |
| South Penn Oil Co., Melvin 293 | 2 | .... |
| South Penn Oil Co., Melvin 294 | 2 | .... |
| South Penn Oil Co., Melvin 295 | 2 | .... |
| Mix Creek Oil Co., Mix Creek 54 | 2 | .... |
| Qunitruple, McKean Producing Co. 22 | 3 | .... |
| J. S. Brown, Bell 4 | 2 | .... |
| Mose Sullivan, Sullivan 11 | 6 | .... |
| Healey Petroleum Corp., Quintruple 18 | 3 | .... |
| Bradford Producing Co., Franchot 10 | 22 | .... |
| Minard Run Oil Co., Cram 10 | 3 | .... |
| Olean Petroleum Co., Fee 17 | 12 | .... |
| E. E. Bryner & Son, Newell 3 | 10 | .... |
| BUTLER COUNTY— | | |
| Willia M. Ruby, Ripper 1 | 5 | .... |
| T. P. Bell, Bell 8 | 2 | .... |
| CLARION-VENANGO FIELD— | | |
| Fryburg Motor Co., Sterner 4 | ¶½ | .... |
| G. and R. Foggan, Henderson 54 | 2 | .... |
| CENTER-MIDDLE FIELD— | | |
| A. E. Tompsett & Co., Tomsett 81 | * | .... |
| TIOGA-WAYNE FIELD— | | |
| Reid Syndicate, Dykes 1 | ¶2½ | .... |
| East Penn Development Co., Hall 1 | ¶3 | .... |

### WEST VIRGINIA

| | | |
|---|---|---|
| CABELL COUNTY— | | |
| D. H. Campbell & Co., Dunn 1 | ¶1¼ | 3194 |
| CALHOUN COUNTY— | | |
| Edward Hess & Co., Evans 2 | ¼ | .... |
| GILMER COUNTY— | | |
| McCall & Co., Stout 5 | 1¼ | 1925 |
| Carnegie Nat. Gas Co., Garrett 1 | * | 2852 |
| BOONE COUNTY— | | |
| South Penn Oil Co., Hopkins 4 | ¶½ | 2226 |
| HARRISON COUNTY— | | |
| Pittsburg & West Virginia Gas Co., Smith 2 | * | 3835 |
| KANAWHA COUNTY— | | |
| G. L. Cabot, Inc., Quincy Coal 23 | * | 1959 |
| G. L. Cabot, Inc., Federal Coal 31 | ¶½ | 3671 |
| LINCOLN COUNTY— | | |
| Frank Yites & Co., Yates 1 | 33 | 1979 |
| Campbell Drilling Co., McMellon 1 | ¶¼ | 2152 |
| MASON COUNTY— | | |
| E. C. Moffett Drilling Co., Newton Hrs. 2 | ¶½ | 1794 |
| MONONGALIA COUNTY— | | |
| S. W. Meals Co., Davidson 1 | * | 2900 |
| PUTNAM COUNTY— | | |
| J. V. Reishman, Dent 1 | ¼ | 1886 |
| WAYNE COUNTY— | | |
| Chartiers Oil Co., Thompson 1 | ¶1 | 3791 |

### SOUTHEASTERN OHIO

| | | |
|---|---|---|
| NOBLE COUNTY— | | |
| Tilton Warren & Co., Mitchell 2 | * | 1664 |
| MORGAN COUNTY— | | |
| Penn Oil & Gas Co., Smith 3 | ¼ | 1568 |
| Cumberland Oil & Gas Co., Hopkins 21 | ¶¼ | 1680 |
| WASHINGTON COUNTY— | | |
| Anderson & Co., Greenlees 2 | ¶¼ | 1505 |

***For Tabulation and Comparison See Market Section***

### CENTRAL OHIO

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| BELMONT COUNTY— | | |
| Central Gas Co., Parks 1 | * | 1988 |
| ATHENS COUNTY— | | |
| Smithenberger & Co., Glass 1 | * | 564 |
| LORAIN COUNTY— | | |
| Ohio Fuel Gas Co., Crocker 3 | ¶3½ | .... |
| Daugherty & Dempsey, Smith 1 | * | 2332 |
| RICHLAND COUNTY— | | |
| Daly & Co., Petit 1 | * | 3192 |
| STARK COUNTY— | | |
| Ohio Fuel Gas Co., Crissinger 3 | ¶2½ | .... |
| F. Brendall & Co., Lake Cable 6 | 3 | 4385 |
| F. Brendell & Co., Kurtzman 1 | ¶2¼ | 5261 |
| East Ohio Gas Co., Slagle 1 | ¶2¼ | 4386 |

### INDIANA

| | | |
|---|---|---|
| HUNTINGTON COUNTY— | | |
| Bert Dennison, Wiley 1 | ¶½ | .... |

### ILLINOIS

| | | |
|---|---|---|
| MONROE COUNTY— | | |
| Webster Oil ½ Gas Co., Rarmes 1 | * | .... |

### KENTUCKY

| | | |
|---|---|---|
| DAVIESS COUNTY— | | |
| Ellis & Ashby, Howard 5 | 75 | 619 |
| HART COUNTY— | | |
| Unknown parties, Seymour School land 1 | 50 | .... |
| Hupp & Duff, Jaggers No. 1, tr 5 | 50 | .... |
| Hupp & Duff, Jaggers No. 1, tr 6 | 100 | .... |
| Hupp & Duff, Jaggers No. 1, tr 7 | 100 | .... |
| Hupp & Duff, Jaggers No. 1, tr 8 | 100 | .... |
| Hupp & Duff, Jaggers No. 1, tr 9 | 100 | .... |
| Hupp & Duff, Jaggers No. 1, tr 10 | 100 | .... |
| Hupp & Duff, Jaggers No. 1, tr 11 | 100 | .... |
| Hupp & Duff, Jaggers No. 1, tr 12 | 100 | .... |
| Hupp & Duff, Spencer 3 | 80 | .... |
| H. C. Smith Co., Johnson 1 | * | .... |
| OHIO COUNTY— | | |
| Oliver Jenkins & Co., Nation Bros. 3 | 5 | 1540 |

### NEW YORK

| | | |
|---|---|---|
| ALLEGANY COUNTY— | | |
| N. V. Franchot, Franchot 2 | 30 | .... |
| N. V. Franchot, Shaner 3 | 10 | .... |
| Martin Bros., Childs 3 | 20 | .... |
| Miller Bros. & Co., Miller 20 | 12 | .... |
| Miller Bros. & Co., Miller 21 | 22 | .... |
| C. M. Lippert & Co., Lippert 15 | 7 | .... |
| Mecadam Oil Co., Mecadam 5 | 7 | .... |
| F. L. Putnam & Co., Pierce 2 | ¶¼ | .... |
| Bradley & Co., South Penn 3 | 7 | .... |
| Richmond Oil Corp., Fee 96 | 3 | .... |
| Eastman & Co., Ames 9 | 7 | .... |

## OKLAHOMA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| CREEK COUNTY— | | |
| C. G. Tibbens, Bartlett 3, se c sw nw 18-14-9e | 40 | 2305 |
| F. R. Billingslea et al, Wayman "A" 2, se c nw nw 22-15-8e | 140 | 2867 |
| McMurry et al, Watkins 1, sw c ne sw 28-17-11e | 30 | 1666 |
| Gled Oil Co., Hollingsworth 3, se c 20-19-9e | 150 | 2133 |
| LOVE COUNTY— | | |
| Batson, Starritt and Autrey, Cross 1, ne nw ne 27-6s-2e | * | 1651 |
| MUSKOGEE COUNTY— | | |
| J. H. McDonald et al, Durant 4, ne c nw ne ne 16-14-18e | * | 1621 |
| Mack Drlg. Co., Richards 1, nw c ne sw 34-16-15e | * | 1196 |
| OKLAHOMA COUNTY— | | |
| Slick Estate, Terminal 5, ne c sw sw nw 3-11-3w | 9465 | 6365 |
| Terminal 4, cnl se sw nw 3-11-3w | 7145 | 6360 |
| Scott et al, Burss 1, nw c sw sw 2-11-3w | 510 | 6248 |
| OKMULGEE COUNTY— | | |
| Babcock Brothers, Harris 3, cnl sw nw 1-14-14e | 30 | 1127 |
| PITTSBURG COUNTY— | | |
| Midwestern O&G, Mattocks 3, cel w½ sw ne 8-7n-18e | ¶1 | 1863 |
| POTTAWATOMIE COUNTY— | | |
| Carter Oil et al, Monet 1, sw c 35-7-4e | 925 | 4230 |
| STEPHENS COUNTY— | | |
| Continental Oil, Dore 1, ne sw se 2-2s-8w | ¶8½ | 1433 |
| Hedrick and Hickman, Andrews 1, nw sw sw 5-2s-7w | * | 2811 |

### KANSAS

| | | |
|---|---|---|
| BUTLER COUNTY— | | |
| Bennett & Able, Jones 1, nw ne ne 25-25-4e | * | 723 |
| COWLEY COUNTY— | | |
| Deal et al, Bennett 1, (owd) lot 1, Blk 47, Musgrove Addn. City of Winfield, 22-32-4e | 240 | 3302 |
| Roth and Faurot, Winfield 4 (cwd) lot 4, Blk 38, College View Addn. City of Winfield, 22-32-4e | 920 | 3286 |
| GREENWOOD COUNTY— | | |
| Simmons et al, Bullion 1, sw c se 22-23-11e | * | 2140 |
| KINGMAN COUNTY— | | |
| Skelly Oil Co., Miles 1, (owd) ne c 30-27-10w | 255 | 3441 |
| McPHERSON COUNTY— | | |
| Dickey Oil Co., Decker "B" 1, nw sw se 35-19-2w | 5200 | 2931 |
| Wakefield et al, Koehn 1, (owd) ne c nw 36-19-2w | 1420 | 3387 |
| Palmer et al, Winn 2, se c nw 7-20-1w | 1275 | 3397 |
| SEDGWICK COUNTY— | | |
| Gypsy Oil Co., Hamant 5, ne sw nw 14-26-2e | 2470 | 2865 |
| Fisher & Lauck, Trustee 3, (owd) ne nw se 19-27-2e | 600 | 3250 |
| Magnolia Pet. Co., Vickers 3, cel sw sw sw 17-27-2e | * | 3350 |
| STAFFORD COUNTY— | | |
| Rosenthal et al, Gray 1, c ne 11-24-13w | * | 4052 |

### NEW MEXICO

| | | |
|---|---|---|
| LEA COUNTY— | | |
| Midwest Refining Co., State 11 (Sec. 4-19s-38e) | 1412½-750 | 1475 |

### LOUISIANA GULF COAST

| | | |
|---|---|---|
| EAST HACKBERRY— | | |
| The Texas Co., State 8-B | * | 3320 |
| SULPHUR— | | |
| Union Sulphur Co., Fee 722 | 1500 | 5430 |

### TEXAS GULF COAST

| | | |
|---|---|---|
| BARBERS HILL— | | |
| Sinclair O.&G. Co., J. F. Wilburn 10 | 1000 | 4849 |
| HIGH ISLAND— | | |
| Yount-Lee Oil Co., Cade 25 | 200 | 5300 |
| HULL— | | |
| Republic Prod. Co., Dollbear 89-A | * | 3297 |
| MOSS BLUFF— | | |
| M. Manning, Ruth Sargent 3 | * | 825 |
| NASH DOME— | | |
| Harrison & Abercrombie, Nash 15 (wo) | * | 6800 |
| PIERCE JUNCTION— | | |
| Isaac & Carwile, Settegast 1 (wo) | * | 3395 |
| RABB RIDGE, or THOMPSON— | | |
| Gulf Prod. Co., Myers 2 | 2000 | 5240 |

### CENTRAL WEST TEXAS

| | | |
|---|---|---|
| BROWN COUNTY— | | |
| Warren et al, J. W. Newton 2 | 25 | 1235 |
| CALLAHAN COUNTY— | | |
| Guffy & Perry, O. E. Radford 1 | 20 | 408 |
| Hart Bros. et al, Cora Grisham 2 | * | 350 |

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| EASTLAND COUNTY— | | |
| John Fail et al, N. J. Ramsower 1 .. | * | 2051 |
| Root-Rhodes & Sykes, M. Hill 4 .... | * | 3732 |
| ERATH COUNTY— | | |
| Goodwin et al, Canfield 1.....¶4¼ | | 3310 |
| PALO PINTO COUNTY— | | |
| Ashe Synd. & Texas Fidelity Oil Corp., W. Hart 3 ..... | * | 4228 |
| Brazos River Gas Co., T. R. Ennis 2 ..... | ¶5 | 3678 |
| Prairie O&G Co.-Amerada Pet. Corp., E. B. Ritchie 1 ..... | 75 | 1703 |
| SHACKELFORD COUNTY— | | |
| Cross & Caskin, W. G. Webb 1 ... | * | 870 |
| THROCKMORTON COUNTY— | | |
| John Cos & Henderson, McKeichan 2 | * | 465 |

## NORTH TEXAS

| | | |
|---|---|---|
| ARCHER COUNTY— | | |
| Deep Oil Dev. Co. & Lindsey Drlg. Co., L. F. Wilson 2, Lse. 1..... | 750 | 2217 |
| FOARD COUNTY— | | |
| The Texas Co., Les K. Johnson 1... | * | 4490 |

## WEST TEXAS

| | | |
|---|---|---|
| WINKLER COUNTY— | | |
| Sid Richardson et al, John Sealy 1.. | * | 3300 |

## CENTRAL EAST TEXAS

| | | |
|---|---|---|
| UPSHUR COUNTY— | | |
| Jas. B. Dunigan e al, D. F. Guest 1 | * | 3850 |
| Gillette-Tarr-Potter & Pilot Oil Co., Irions 1 ..... | * | 3942 |
| JOINER AREA— | | |
| Arcadia Refining Co., Green 1-B....8500 | | 3781 |
| C. L. Archer et al, Stewart 1 .....9200 | | 3794 |
| Bailey & Trimble, E. B. Alford (5-ac) 1 ..... | 130 | 3725 |
| Blackwell O&G Co.-Jones Bros., W. P. Moore (33-ac) 4 .....10,000 | | 3651 |
| D. A. Culberson (London Pet. Corp.), S. S. Cook (5-ac) 1.....6500 | | 3712 |
| Deep Rock Oil Co.-Amerada Pet. Corp., Stovall (193-ac) 5.....7000 | | 3653 |
| East Texas Loan & Investment Co., S. S. Cook (10-ac) 1 .....15,000 | | 3747 |
| R. W. Fair et al, Fee (27-ac) 2.....7200 | | 3666 |
| The Falcon Co., A. K. Perkins (76-ac) 2 .....9500 | | 3632 |
| Golding-Murchison Oil Co., R. W. Fair-Shell (100-ac) 5 .....8000 | | 3631 |
| Gulf Prod. Co., Cashen 5 .....8800 | | 3784 |
| Humble O&R Co., J. H. Silvey 3-B.9200 | | 3698 |
| H. L. Hunt et al, H. C. Maxwell 1-B .....9500 | | 3756 |
| E. R. Liner, Inc. et al, W. R. Wolford (4-ac) 1 .....11,000 | | 3766 |
| Lion Oil Refining Co., H. Brooks (87-ac) 6-A .....4000 | | 3715 |
| H. Brooks (174-ac) 5-B .....2000 | | 3750 |
| Marr Drlg. Co., J. E. Wheelis 1...10,000 | | 3784 |
| Jim R. McMurray et al, R. W. Fair 2 .....7200 | | 3663 |
| Mid-Kansas O&G Co., Joe Mills (44-ac) 3 .....8700 | | 3665 |
| A. G. Oliphant et al, W. O. Alford (40-ac) 2 .....10,500 | | 3719 |
| I. P. O'Neil et al, W. O. Alford (160-ac) 1 .....7200 | | 3834 |
| Phillips & Bennett, E. B. Alford (5-ac) 1 ..... | 250 | 3705 |
| Smith & Pat H. Torrance, P. H. Torrance (14½-ac) 3 .....9000 | | 3668 |
| Stanolind O&G Co.-Pure Oil Co., Ras Lacey (100-ac) 1 ..... | ¶17 | 3666 |
| Sullivan & Burch, E. B. Alford 1.. | 500 | 3690 |
| The Texas Co., W. W. Henry (229-ac) 1 .....9600 | | 3620 |
| Ward Oil Corp. et al, A. P. Finney (43¼-ac) 4 .....6000 | | 3749 |
| C. L. Wickliffe & Randall (Dozier), S. S. Cook (9-ac) 1 .....12,000 | | 3740 |
| Carl G. Wiley et al, Sanders 2 ....8800 | | 3742 |
| KILGORE AREA— | | |
| H. L. Barrett et al, J. S. Bean 1..7500 | | 3603 |
| Gulf Prod. Co., S. Hilburn (80-ac) 12,000 | | 3535 |
| Gulf-Devonian Oil Co., C. E. Christian (100-ac) 3-A .....9800 | | 3646 |
| Humble O&R Co., S. S. Laird (127-ac) 14-B .....6000 | | 3627 |
| W. P. Moore (18-ac) 2-C .....7000 | | 3665 |
| J. T. Sexton 2-A .....6500 | | 3717 |
| C. L. McMahon et al, J. King (20-ac) 1 .....8000 | | 3649 |
| Paul L. Miller et al, Ben Laird (1-ac) 1 .....7500 | | 3564 |
| Moore et al, J. W. Janes 1 .....7500 | | 3595 |
| Pelican Nat'l Gas Co., A. Spear-Laird (92-ac) 4 .....8500 | | 3641 |
| Petroleum Finance Corp., W. D. Lacy (86-ac) 3 .....11,000 | | 3575 |
| Shell Pet. Corp., W. P. Moore 7 ..7500 | | 3697 |
| Stanolind O&G Co., M. R. Terrell (50-ac) 2 .....9000 | | 3693 |
| Steen Drlg. Co., W. D. Lacy-Shell (163-ac) 5 .....9200 | | 3673 |
| Travis & Wair Oil Co., A. B. Loughridge (30-ac) 1 .....7500 | | 3728 |
| C. B. Walters et al, J. A. Knowles 1 .....9000 | | 3630 |
| York Oil Co., J. A. Knowles (44¼-ac) 1 .....7500 | | 3630 |
| LONGVIEW AREA— | | |
| Abernathy & Kirkpatrick (J. A. Johnson, Tr.), J. H. Victory 2..13,000 | | 3662 |
| Amerada Pet. Corp., D. B. McPherson (40-ac) 2 .....8500 | | 3538 |
| Arkansas Fuel Oil Co., F. K. Lathrop (92½-ac) 4-C .....9200 | | 3620 |
| C. L. Taylor (2192-ac) 1 .....12,000 | | 3516 |
| Cox & Hamon, Jr., L. A. Rodden (110-ac) 5 .....8000 | | 3591 |
| Lonnie Glasscock et al, G. S. Mattox (8-ac) 1 .....8000 | | 3608 |
| Gregg Oil Co., T. & P. Ry. Co. fee (6-ac) 1-E .....11,000 | | 3552 |
| Grisham-Hunter Corp., T&P Ry. Co. fee (Blk. 31) 1-E .....15,000 | | 3661 |
| Gulf Prod Co., Lacy-Snider (25-ac) 5 .....10,000 | | 3544 |
| Hankamer & Lee, T. S. Lee (1-ac) 1 .....11,000 | | 3663 |
| Humble O&R Co., J. K. Edwards (200-ac) 10 .....6500 | | 3628 |
| G. W. Johnson (100-ac) 6 .....7500 | | 3709 |
| Invincible Oil Co., W. M. Wheeler (49½-ac) 1 .....9500 | | 3658 |
| Lloyd Oil Corp., B. B. Fenton (50-ac) 2 .....7500 | | 3707 |
| F. L. Luckel et al, J. B. Doby (2½-ac) 1 .....8500 | | 3560 |
| Magnolia Pet. Co., R. A. Adkins (100-ac) 8 .....10,000 | | 3763 |
| N. W. Blackwell (90-ac) 4 .....11,000 | | 3692 |
| T. W. Tuttle (48-ac) 4 .....9500 | | 3595 |
| H. S. Mays et al, Schultz 1 .....13,000 | | 3700 |
| Navarro Oil Co., E. L. Walker 3..7500 | | 3609 |
| Geo. L. Pace & Mitcham, R. A. Adkins (49-ac) 2 .....11,000 | | 3764 |
| N. G. Powell et al, Wilhite 1 .....9600 | | 3670 |
| Roeser-Pendelton, Inc.-J. K. Wadley, D. D. Sheffield (50-ac) 3...10,000 | | 3630 |
| Shell Pet. Corp., C. C. Slaton (100-ac) 3 .....12,000 | | 3672 |
| C. C. Slaton (100-ac) 4 .....12,500 | | 3650 |
| Southland Oil Co., C. Christian (16 1/3-ac) 1 .....9000 | | 3691 |
| Sanolind O&G Co., E. L. Walker (35-ac) 2-A .....6500 | | 3579 |
| Stanolind-Simms Oil Co., Wm. Harley 2-B .....9000 | | 3589 |
| J. C. Persons (146.7-ac) 11.....8000 | | 3554 |
| A. J. Tuttle (95-ac) 2 .....11,000 | | 3590 |
| Steen Drlg. Co., J. F. Phillips-Shell (94-ac) 1 .....9500 | | 3667 |
| Sun Oil Co., J. W. Adkin (166.2 ac) 6 .....11,000 | | 3536 |
| M. C. Satterwhite (82.7-ac) 7 ...8300 | | 3602 |
| Sutton & Hawkins, J. A. Whitaker (26-ac) 4 .....10,500 | | 3537 |
| Woodley Pet. Co., T. B. Harris 1.13,000 | | 3529 |

## SOUTH TEXAS

| | | |
|---|---|---|
| BASTROP COUNTY— | | |
| Texas Dev. Co.'s Ray 1..... | * | 2660 |
| BEE COUNTY— | | |
| McMurray's Ray 1 ..... 864 | | 3900 |
| Texas Co.'s Gremmel 3.....1560 | | 3890 |
| FRIO COUNTY— | | |
| Arthur Wray's Roche 1..... | * | 3707 |
| JIM HOGG COUNTY— | | |
| Foree et al's Holbein 1..... | * | 2501 |
| REFUGIO COUNTY— | | |
| Larcro Gas & Pet. Co.'s Struach 4. 100 | | 3692 |
| Heard 1 (wo)..... 10 | | 3685 |
| STARR COUNTY— | | |
| Davis et al's Kelsey Bass 1..... 15 | | 484 |
| TRAVIS COUNTY— | | |
| Fritz Fuch's Smith 1 ..... | * | .... |
| WEBB COUNTY— | | |
| Mag. Pet. Co.'s Benavides 6..... 100 | | 2345 |
| O. W. Killam's Bruni 1 ..... | * | 3407 |
| WILLIAMSON COUNTY— | | |
| McLean's Miller 1 ..... | * | 1830 |
| ZAPATA COUNTY— | | |
| United N & S Dev. Co.'s Gutierrez 1 ..... | * | 1947 |

*Left to right: W. Henry Black, tool pusher, Humble Oil & Refining Company; R. O. Burcham, Halliburton Oilwell Cementing Company; C. C. "Grande Ecaille" Clifton, superintendent, Humble Oil & Refining Company. While waiting to cement Cockrill-Moran 7 at Lake Grande Ecaille (Tarpon Lake) or Lake Washington, Plaquemines Parish, Louisiana, the above gentlemen landed a few bull reds off Ft. Livingston. The party caught a catfish, bull reds and a dog shark*

# Permits Granted for New Wells

▼ ▼ ▼

## CALIFORNIA

DEVIL'S DEN—Ray W. Taylor, No. 1, 29-25-19.

DOMINGUEZ—Shell Oil Co., Reyes 42, 34-3-13.

MIDWAY—Standard Oil Co., No. 108, 35-31-23.

## LOUISIANA

SABINE PARISH—W. M. Coates, Shreveport, Joe McNeely 3, 14-7n-11w, 250 ft n and 250 ftw of se cor of NW¼ NE¼. W. F. Lacey, Shreveport, J. H. McNeely 2, 14-7n-11w, 500 ft e of w line and 300 ft n of s line of sec. Reid & Stone, Shreveport, McNeely 1, 300 ft e and 150 ft n of center of sec.

## KANSAS

ELLSWORTH COUNTY — Aylward et al, more et al, Stoltenberg 1, se ne se 22-16-10w. Statman 3, se sw se 1-17-10w. H. K. Beard-

GREENWOOD COUNTY—Mathews & Rex, Wilson 1, se c nw 8-24-12e.

McPHERSON COUNTY—Braden, McClure et al, Sadey 1, sw c 18-19-1w. Helmerick, Payne et al, Lovett 1, sw nw se 12-19-2w.

SUMNER COUNTY—Gypsy Oil, Williams 1 (owd) se c sw ne sw 16-35-3w.

## OKLAHOMA

CREEK COUNTY—F. R. Bilingslea, Bissett 2, nw c se nw 22-15-8e. A. A. Bailey O&G, Weaver "C" 2, sw c nw sw, 18-19-9e.

HUGHES COUNTY—George B. Orr, Roy 1, nw ne nw 15-7-8e.

MARSHALL COUNTY—C. Dillingham et al, Franklin 1, nw c ne sw 33-6s-7e. F. H. E. Oil Co., Byrd 1, se c ne, 8-8s-6e.

MUSKOGEE COUNTY—R. D. Hash et al, Richards 1, cnl nw sw 34-16-15e. Mack Drlg. Co., Richards 7, ne c se ne 33-16-15e. Aggas Drlg. Co., McDaniel 1, se c 33-16-15e.

OKLAHOMA COUNTY—Slick Estate, Terminal 6, cnl ne ne sw, 3-11-3w.

PONTOTOC COUNTY—Barnsdall Oil Co. et al, Hart 2, sw nw nw 27-5n-6e. Dickson Petroleum Corporation, Jackson 1, sw c 22-5n-6e.

SEMINOLE COUNTY—Jarvis and Holmes, Fish 2, se nw se 30-7-8e.

STEPHENS COUNTY—Geo. Pace et al, Allen 3, nw c se se ne 3-2s-8w. Dunmar Oil Co., Dunmar 1, nw ne ne 11-3s-8w.

TULSA COUNTY—Holmes Drlg. Co., Cook 1, cnl ne sw 7-19-10e.

## TEXAS

ARCHER COUNTY — Perkins & Cullum, Wichita Falls, Falls, D, 83, 2, Blk. 3, F.C.S.L. sur, 150 ft from w and 450 ft from s line. E. H. Sharp, Olney, G. W. Coffield, 40, 1, S 2, T.C. Ry. sur, 150 ft from n and e lines. United Prod. Co., Wichita Falls, W. J. Logan, 101, 1, S 22, J. M. Taylor sur, 150 ft from e and 200 ft from s line.

BEXAR COUNTY—Chiquita Oil Co., San Antonio, A. Piniazek, 200, 1, Martinez & Arocha sur, 690 ft from n and 160 ft from e line. Alamo Natural Gas Co., San Antonio, W. Gembler, 208, 3. No. 51 A. Manchaca sur, 180 ft from n and e lines.

BRAZORIA COUNTY—Texas Co., Houston, W. T. Belcher, 357, 2, H. N. Little sur, 1778 ft from nw and 1231 ft from ne line.

BROWN COUNTY—Van Bebber & Trout, Brownwood, J. S. Leach, 40, 1, S 34, J. C. Lockwood sur, 180 ft from n and w lines.

CAMP COUNTY—Monitor Oil Co., Pittsburgh, Penn., G. L. Merrell, 110, 1, E. Mathews sur, 527 ft from w and 722 ft from n line.

CHEROKEE COUNTY—Mid-Kansas Oil & Gas Co., Shreveport, La., H. D. Kelly, 86, 1, M. S. Coy sur, 537 ft from e and 330 ft from s line.

DEWITT COUNTY—C & M Drilling Co., San Antonio, J. C. Tom, 100, 1, A. Lazo sur, 150 ft from s and e lines.

FALLS COUNTY—C. C. Curtis et al, Marlin, J. L. Davis, 2250, 1, P. Zarza sur, se corner; 2, 1000 ft nw of No. 1.

FORT BEND COUNTY—Jas. T. O'Hara, Sealy, T. A. Brown, 1566, 1, Barrett & Harris sur, 1357 ft from n and 675 ft from e line. Gulf Prod. Co., Houston, T. R. Booth, 452, 1, Jno. Rabb sur, 922 ft from w and 475 ft from s line. H. M. Naylor, Kansas City, Mo., Fee, 653, 1, H. Chrisman sur, 200 ft from n and e lines.

FRANKLIN COUNTY—J. F. Mills, Dallas, L. S. Harper, 118, 1, W. N. Dawson sur, 475 ft from n and 550 ft from e line.

GREGG COUNTY — Woodley Pet. Co., Shreveport, La., T. D. Harris, 30, 2, Wm. Castleberry sur, 330 ft from s and e lines. Alco Royalty Corp., Tulsa, Okla., A. N. King, 24, 2, G. A. Thomason sur, 400 ft from s and w lines; A. N. King, 10, 1A, G. A. Thomason sur, center. B & B Oil Co., Gladewater, M. E. Church, 1, M. Dillard sur, ne corner of Blk. 4. Bobby Manziel, Gladewater, C. H. Moore, 2, 1, M. Dillard sur, 160 ft from e and 195 ft from s line Blk 53. A. G. Adams, Overton, E. Hilburn, 35, 2. W. P. Chisum sur, 150 ft from s and w lines. Prod. Inv. Corp., Dallas, J. A. Butts, 11¼, 3, M. Van Winkle sur, 130 ft from sw and 175 ft from se line. California Pet. Corp., Shreveport, La., C. B. Johnson, 22, 2, J. R. Crosby sur, 442 ft from s and w lines. B. M. Hester, Longview, C. C. Crews, 40, 1, L. Perkins sur, 350 ft from e and 330 ft from n line. Donald Marr, Corsicana, P. E. Barton, 1, 1, M. Van Winkle sur, 92 ft from n and 98 ft from e line. E. L. Smith Oil Co., Inc., Mexia, E. E. Anderson, 10, 1, G. W. Hooper sur, 330 ft from n and 188 ft from w line; 2, 330 ft from s and 188 ft from w line. Gilcrease Oil Co., Tulsa, Okla., A. Christian, 31, 3, H. Hathaway sur, 155 ft s of center of n line. Central Commercial Oil Co., Tulsa, A. A. King, 137, 2, M. Tenison sur, 250 ft from n and 1060 ft from w line. King & Massengill, Longview, E. I. Anderson, 13, 3, G. W. Hooper sur, 330 ft from n and 451 ft from e line. J. O. Whittington, Longview, Bumpas, 31, 3, Wm. Castleberry sur, 330 ft from n and w lines. Weaver-Crim Oil Corp., Longview, B. Laird, 82, 6, W. P. Chisum sur, 273 ft from n and 290 ft from e line; 7, 600 ft s of No. 6; 8, 510 ft s of No. 7; 9, 627 ft s of No. 8. Selby Oil & Gas Co., Tulsa, Okla., L. C. Ingram, 80, 5, W. E. Pasteurm sur, 330 ft from n and w lines. Jewel Kimberlin, Gladewater, Fee, 1, Gladewater sur, center of Blk. 11. Roeser & Pendleton, Fort Worth, J. E. Sheffield, 50, 4, D. Sanchez sur, 728 ft from n and 232 ft from w line. Kewanee Oil & Gas Co., Tulsa, Okla., Barton, 33, 4, H. Hathaway sur, 330 ft from s and w lines. Columbia Oil & Gas Co., Dallas, J. B. Doby, A, 42, 3, W. M. Castleberry sur, 234 ft from e and 150 ft from s line. Cox & Hamon, Ardmore, Okla., E. Lacy, 50, 5, J. Ruddle sur, 425 ft from w and 180 ft from s line. Alco Royalty Corp., Tulsa, Okla., R. K. Johnson, 20, 2, D. Sanchez sur, 330 ft from s and w lines. Canadian Oil Prod. Co., Longview, J. A. Whitaker, 7½, 2, C. H. Alexander sur, 330 ft from w and 218 ft from s line. Pilot Oil Co., Dallas, T. B. Harris, 91, 3, W. H. Castleberry sur, 500 ft from e and 152 ft from s line. M. E. Gaskill, Tulsa, Okla., S. J. Kay, 25, 3, L. J. Rigsby sur, 250 ft from s and w lines. T. D. Humphrey, Tyler, A. Spear, 23, 2, M. Van Winkle sur, 175 ft from n and 450 ft from w line. W. C. Knox, Kilgore, Elder Est., 2½, 1, M. Van Winkle sur, 105 ft from w and 150 ft from s line. Lucey Pet. Co., Longview, R. Christian, 32, 2, Blk. 7, G. W. Hooper sur, 332 ft s of No. 1 Lee & Phillips, Gladewater, E. M. Wood, 4, 2, L. J. Rigsby sur, 150 ft from e and 151 ft from s line. M. J. Munn, Longview, I-GN, 2, M. Van Winkle sur, sw corner; 3, 410 ft ne of No. 2; 4, 465 ft ne of No. 3; 5, 465 ft ne of No. 4; 6, 465 ft ne of No. 5. Wheelock & Collins, Corsicana, Clayton, 73, 2, L. B. Outlay sur, 250 ft from n and 300 ft from w line. National Oil Co., San Antonio, L. Martin, 20, 1, W. P. Chisum sur, 330 ft from n and w lines. T. S. Schroeder, Dallas, J. C. Bumpas, 26, 3, W. H. Castleberry sur, 330 ft from n and w lines. Sun Oil Co., Dallas, J. C. McKinley, 80, 6, D. Sanchez sur, 415 ft from n and 330 ft from w line; A. Tooke, A, 50, 3, W. H. Castleberry sur, 810 ft from n and 385 ft from e line. East Texas Refg. Co., Dallas, E. Mitchell, 15, 2, M. Van Winkle sur, 160 ft from n and e lines. Atlantic Oil Prod. Co., Dallas, J. Bander, 84, 2, D. Ferguson sur, 178 ft from n and 330 ft from e line; W. P. Duncan, 155, 3, D. Ferguson sur, 178 ft from s and 330 ft from e line; J. J. Fuller, 50, 3, M. Irwin sur, 330 ft from n and e lines; J. Wilson, 100, 4, W. C. Wakeland sur, 330 ft from s and e lines; W. P. Duncan, 155, D. Ferguson sur, 950 ft from w and 430 ft from s line; 5, 1820 ft from w and 840 ft from s line; 6, 970 ft from n and 890 ft from e line; Jas. Wilson, 100, 3, W. C. Wakeland sur, 330 ft from s and w lines. Humble Oil & Refg. Co., Houston, J. H. Sheppard, 57, 1, T. Allen sur, 330 ft from s and w lines; D. Johnson, 10, 5, L. J. Rigsby sur, 330 ft n of center of s line; C. C. Clemens, 75, 3, D. Sanchez sur, 330 ft from w and 150 ft from s line; T. M. Armstrong, 79, 5, J. R. Crosby sur, 330 ft from n and 225 ft from w line. Texas Co., Shreveport, La., R. B. Walls, 104, 2, M. Tenison sur, 330 ft from s and e lines. Tidal Oil Co., Fort Worth, M. B. Hughey, 200, 3, J. Hilliard sur, 600 ft from w and 1050 ft from s line; M. G. Barton, 194, 7, S. P. Hollingsworth sur, 330 ft from s and e lines; J. J. Castleberry, 200, 6, D. Sanchez sur, 900 ft from w and 330 ft from s line; A. Davis, 130, 3, Painter sur, 375 ft w of center of e line. Stanolind Oil & Gas Co., Longview, J. J. Flewellen, 200, 3, M. Mann sur, 2370 ft from e and 224 ft from s line; O. J. Albright, 90, 3, W. H. Hart sur, 330 ft from s and w lines. Barnsdall Oil Co., Tulsa, Okla., M. Adams, 102, 1, G. W. Hooper sur, 330 ft from n and w lines; J. G. McGrede, 109, 10, D. Sanchez sur, 319 ft from e and 2301 ft from s line. Yount-Lee Oil Co., Beaumont, M. McKinley, 23, 2, Wm. Robinson sur, 330 ft from n and 294 ft from e line; I. Denson, 21, B2, D. Sanchez sur, 200 ft from n and 330 ft from e line. Arkansas Fuel Oil Co., Shreveport, La., M. D. Allison, 59, 5, Wm. Robinson sur, 280 ft from w and 330 ft from s line. Simms Oil Co., Dallas, Mrs. M. O. Sheppard, 20, 3, G. R. Rains sur, 190 ft from n and 330 ft from w line; A. Christian, 23, 2, G. W. Hooper sur, 990 ft from n and 219 ft from e line. Fain-McGaha Oil Corp., Wichita Falls, W. A. Bouknight, 53, 3, H. H. Edwards sur, 330 ft from n and e lines. Magnolia Pet. Co., Dallas, J. Radford, 252, 3, M. Tenison sur, 330 ft from n and e lines. Prairie Oil & Gas Co., Ranger, A. A. Lockhart, 45, 3, Jno. Blair sur, 380 ft from n and 330 ft from w line. Sinclair Oil & Gas Co., Fort Worth, M. Moncrief, 307, 20, W. H. Castleberry sur, 330 ft from n and e lines. Gulf Prod. Co., Houston, R. H. Still, 189, 1, Jno. Wilkinson sur, 138 ft from w and 104 ft from s line.

GRAY COUNTY—Danciger Oil & Ref. Co., Fort Worth, Byrum, 80, 3, S 188, B 3, I-GN sur, 330 ft from n and e lines. Prairie Oil & Gas Co., Ranger, D. Pope, 80, 1, S 173, B 3, I-GN sur, 330 ft n of No. 8.

GRIMES COUNTY—Rianjo Pet. Co., Dallas, J. E. Cuthrell, 110 2, P. B. O'Connor sur, 1700 ft e of center of w line.

HARRIS COUNTY—Gulf Prod. Co., Houston, H. C. Cain, 175, 9, J. Hamilton sur, 589 ft from n and 290 ft from w line. Rio Bravo Oil Co., Houston, J. J. Settegast, A, 124, A21, J. Kopman sur, 400 ft from n and 200 ft from e line.

LIBERTY COUNTY—Republic Prod. Co., Houston, Dolbear, 800, 145, J. Devore sur, 200 ft ne of No. 61.

LAMAR COUNTY — Doyle & Jondreau, Paris, L. Martin, 132, 1, J. Deck sur, 420 ft from n and 200 ft from e line.

LIVE OAK COUNTY—V. G. Schimmel et al, San Antonio, E. Terrell, 2500, 2, M. Killely sur, 3700 ft from n and 4300 ft from e line.

LOVING COUNTY — Wm. Little, Pecos, H. Freels, 30, 1, S 92, B 1, W&NW sur, 330 ft from n and 410 ft from e line.

MATAGORDA COUNTY—United North &

South Oil Co., San Antonio, F. L. McDonald, 31, 1, S 5, B 9, I-GN sur, 50 ft from s and w lines.

MOORE COUNTY—Sunset Oil Co., Amarillo, R. O. C. Brumley, 320, 1, S 360, B 44, H&TV sur, 330 ft from n and wli sw¼.; B. Dore, 320, 1, S 318, B 44, H&TC sur, 330 ft from n and w lines of sec.

PECOS COUNTY—Culbertson Bros., Fort Worth, M. Smith, 520, 6B, S 39, B 194, GC& SF sur, 1140 ft from e and 150 ft from n line.

RUSK COUNTY — J. E. DeVant, Tyler, J. Redic, 1, Thos. Grace sur, 206 ft from n corner and 32 ft from e line. Stewart & Duffy, Overton, S. C. Green, 1, 1, Tutt sur, center. Haynes Drilling Co., Shreveport, La., J. T. Brown, 40, 5, M. J. Pru sur, 625 ft from e and 160 ft from s line. Walter Allen, Tyler, A. L. Towns, 1, 1, Cordova sur, center. P. T. Fullwood, Corsicana, W. P. Brightwell, 3, 1, R. E. Winn sur, 279 ft from n and 162 ft from w line. Patterson Drilling Co., Henderson, W. P. Brightwell, 3, 1, R. E. Winn sur, 247 ft from n and 150 ft from e line. J. R. Meeker, Fort Worth, O. Roberson, 5, 1, Thos. Grace sur, 250 ft from n and e lines. K. & P. Oil Co., Tyler Brock, 12, 3, R. W. Smith sur, 150 ft from e and 153 ft from s line. Tex-Jersey Oil Corp., Tyler, W. P. Keeling, 6, 2, Cordova sur, 165 ft from n and 168 ft from w line. Ajo Oil Corp., Dallas, S. E. Sanders, 55, 3, T. J. Martin sur, 97 ft from e and 600 ft from s line. S. P. Borden, Shreveport, La., R. G. Mason, 7½, 1, J. B. Cadena sur, 286 ft from s and e lines. Taubert & McKee, Tyler, L. Tolliver, 6, 2, f. Ximinez sur, 150 ft from n and w lines. Sonbar Corp., Eldorado, Ark., A. P. Finney, 62, 4, I. G. Parker sur, 400 ft from n and 272 ft from e line. Bert Aston, Henderson, Mayfield-Alford, 46, 3, T. J. Moore sur, 133 ft from n and 1067 ft from w line. Friedman Oil Corp., Tyler, Mayfield, 123, 3, W. R. Cook sur, 150 ft from s and e lines. Spandsco Oil & Royalties Corp., Dallas, W. P. Brett, 49, 3, M. J. Pru sur, 330 ft from s and e lines. Lion Oil & Ref. Co., Eldorado, Ark., H. Brooks, B, 87, 7, M. J. Pru sur, 850 ft from e and 210 ft from s line. Geo. I. McGee, Kilgore, Knights of Tabor, ½, 1, H. Hobson sur, 75 ft from s and e lines. Lewis Prod. Co., Tyler, L. C. Pegues, 40, 4, Geo. Cooper sur, 330 ft from e and 280 ft from s line. Ward Oil Corp., Ardmore, Okla., Giles, 41, 5, M. J. Pru sur, 150 ft from n and 200 ft from e line. Dean & Adkisson, Fort Worth, E. B. Alford, 3, 1, I. G. Parker sur, center. Republic Prod. Co., Houston, J. H. Scoggins, 141, 3, W. W. Simms sur, 330 ft from n and 159 ft from e line. Mid-Kansas Oil & Gas Co., Shreveport, La., G. W. Moore, 92, 1, W. S. Roan sur, 425 ft from n and 1165 ft from e line. Gulf Prod. Co., Houston, C. E. Christian, 277, 12, W. W. Simms, 207 ft from w and 330 ft from s line; A. Laird, 54, 6, I. Ruddle sur, 1520 ft from e and 339 ft from n line. Shell Pet. Corp., Dallas, T. Wells, 72, 1, D. Clark sur, 195 ft from w and 300 ft from s line. Humble Oil & Ref. Co., Houston, C. A. Brightwell, 45, 4, T. J. Martin sur, 97 ft from e and 1889 ft from s line; J. E. Sexton, B, 50, 3, T. J. Martin sur, 609 ft from w and 330 ft from s line. East Texas Ref. Co., Dallas, O. H. Grissom, 84, 4, F. Cordova sur, 1424 ft from w and 330 ft from s line; A. Givens, 20, 2, R. W. Smith sur, 173 ft from n and 200 ft from e line.

SHELBY COUNTY — A. H. Wray, Fort Worth, C. A. Hayden, 152, 1, D. T. F. Yordt sur, 550 ft from e and 330 ft from s line.

SMITH COUNTY—Sinclair Oil & Gas Co., Fort Worth, A. S. Jarvis, A, 266, 10, J. Vargas sur, 330 ft from n and 1013 ft from e line.

STARR COUNTY—J. A. Turner, San Antonio, A. K. Bass, 20, 1, S 77, B 7 sur, 150 ft from n and e lines.

THROCKMORTON COUNTY—Shappell Oil Co., Wichita Falls, U. C. S. L., 40, 9, Blk. 27, 300 ft s of No. 3. Cox & Henderson Oil Co., Olney, D. McKeichan, 224, 2, B 2, Comanche sur, 200 ft from e and 2020 ft from n line.

UPSHUR COUNTY—Conservative Oil Co., Dallas, Victory, 100, 1, E. A. J. Evans sur, 330 ft from n and w lines. J. A. Woods, Wichita, Kas., J. S. Sanders, 45, 3, T. Allen sur, 271 ft from n and 1059 ft from e line. J. C. Falvey, Longview, B. Doby, 20, 1, M. Mann sur, 227 ft from n and 330 ft from e line. H. W. Clarkson, Tyler, J. O'Byrne, 46, 1, S. Harrell sur, 330 ft from n and 195 ft from e line. Saturn Oil Co., Ardmore, Okla., W. F. Smith, 25, 1, J. M. Pineda sur, 314 ft from n and 385 ft from e line. W. H. Peckham et al, Longview, J. B. Webb, 10, 2, G. W. Hooper sur, 140 ft from w and 160 ft from s line. Sun Oil Co., Dallas, A. J. Watkins, 54, 2, J. M. Pineda sur, 330 ft from w and 452 ft from s line.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, J. A. Bracken, 44, 3, J. Walling sur, 684 ft from n and 250 ft from w line; W. E. Morris, 68, 2, J. Walling sur, 250 ft from w and 597 ft from s line; M. P. Neills, 100, 5, Jas. Rose sur, 225 ft from e and 200 ft from s line; A. R. Humphrey, 100, 2, A. McPhail sur, 200 ft from n and 225 ft from w line; R. V. White, 35, 4, NCSL sur, 250 ft from w and 200 ft from s line. E. M. Thomason & Co., Inc., Denver, Colo., W. M. Corley, 40, 1, F. Montgomery sur, 450 ft from nw and 300 ft from sw line.

WICHITA COUNTY — Alvin Abraham, Bridgetown, S. A. Waits, 100, 7, BBB&C sur, 1800 ft from n and 700 ft from e line.

YOUNG COUNTY—Watson & Terrell, Newcastle, A. C. Watson, 101, 10, 249 TE&L sur, 950 ft from n and 682 ft from e line. Prairie Oil & Gas Co., Ranger, O. D. Lisle, 80, 1, J. M. Kirby sur, 330 ft from s and e lines. N. B. Crenshaw et al, Graham, B. Thompson, 40, 1, 1911 TE&L sur, 1301 ft from w and 150 ft from n li of sec. N. D. Goldsmith et al, Olney, J. R. Wilson, 50, 1, 162 TE&L sur, 750 ft from e and 150 ft from s line. Cunningham & McDonald, Loving, C. W. Johnson, 50, 8, 450 ft from w and 160 ft from s line. Fain-McGaha Oil Corp., Wichita Falls, J. P. Dunnigan, 60, 1, 199 TE&L sur, 150 ft from n and e lines of sw¼.

ZAPATA COUNTY—Trevino Oil Corp., Laredo, I. G. Trevino, 20, 16A, S 412, B 14, 150 ft from s and e lines. Winch & Billings, Laredo, J. Bustamante, 31, 8, No. 35 Comitas sur, 150 ft from s and w lines. Allied Oil & Gas Co., Laredo, E. Gutierrez, 432, 21, No. 4 Comitas sur, 656 ft from w and 500 ft from s line. Nordan & Morris, Laredo, P. Santos, 321, 3, No. 6 Comitas sur, 150 ft from s and e lines.


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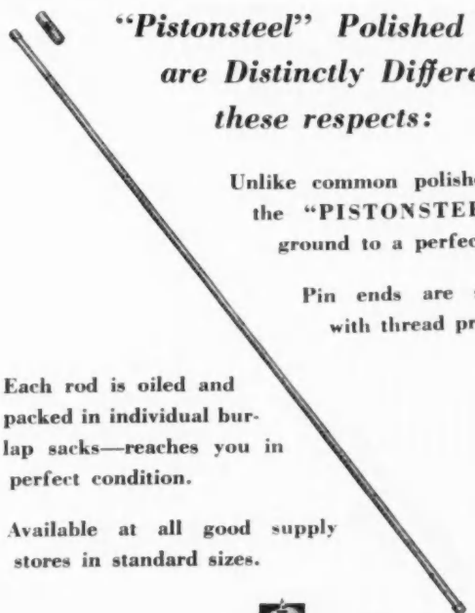

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# Wildcat Reports From All Sections

## SOUTHERN CALIFORNIA

CALABASAS—L. W. Rucker's No. 1, 26-1-17, sd 750 ft.

COYOTE PASS—Davidson Oil Co., Fee 1, 32-1-12, lcn, may not sp.

EL NIDO—L. C. Hunt's No. 1, 29-3-14, lcn, awaiting developments in offset. Mohawk Pet. Co.'s Pavey 1, 29-3-14, dr hard sand 5515 ft, will suspend operations if showings not found during next 100 ft.

HERMOSA BEACH — Corniel Oil Corp.'s Hermosa 1, 31-3-14, co 3100 ft, no showings. Westwood Oil Producers' Hermosa 2, 6-4-14, sdtr liner 2165 ft.

LYNWOOD—William L. Jones' Graham 1, 31-2-12, dr shale 635 ft.

MONTEBELLO — Wardell and Menichini's No. 1, 7-2-11, rigged to sp.

NEWPORT—Ajax Pet. Co.'s B. G. 1, 16-6-10, dr hard sand 6915 ft. Nuoil Co.'s Banning 2, 29-6-10, pumping 15 gravity oil, td 1975 ft, may sd.

OLINDA—Graham-Loftus Oil Co.'s No. 1, 18-3-9, plugged to 4100 ft, td 9284 ft, will test upper showings.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, Western Oil and Refining Company may take over well, td 7405 ft.

PLAYA DEL REY—Cooperative Development Co.'s No. 1, 26-2-15, rig.

ROSECRANS — Avalon Park Development Co.'s No. 1, 19-3-13, rig, will sd.

WILMINGTON—Ranger Pet. Corp.'s Watson 2, 21-4-13, pumping 25 bbls 14 gravity oil, td 3784 ft.

## NORTHERN CALIFORNIA

### KERN COUNTY

ANTELOPE VALLEY—Meridian Oil Co.'s No. 1, 11-9-15, sd 3970 ft.

BUTTONWILLOW — Graham-Loftus Oil Co.'s Carmel 1, 20-27-22, co 5900 ft, hole caving. General Pet.'s Morris 1, pulling 6⅝-inch cas, td 2615 ft. Milham Exploration Co.'s Crites 1, 8-28-23, sd 4496 ft; Kern 2, 8-28-23, shut in at 2702 ft as gas well; Kern 10, 5-28-23, dr 200 ft.

DEVIL'S DEN—Cumberland Oil Co.'s Cumberland 2, 17-26-18, fsh 3226 ft.

McKITTRICK—T. H. Purman's No. 1, 22-29-21, oil showings 2835 ft. Welport Oil Co.'s No. 8, 26-29-21, dr 1065 ft.

SEMITROPIC — Fullerton Oil Co.'s Core Hole C, 25-27-23, dr shale 700 ft.

WEED PATCH—Osborn-Colter's Duff 2, 15-30-29, pumping 35 bbls 15 gravity oil, td 2006 ft.

WHEELER RIDGE—Barnsdall's K. C. L. 1, 15-11-20, dr shale 3400 ft. Descanso Oil Co.'s Tejon 1, 31-11-19, dr shale 700 ft.

### SANTA BARBARA COUNTY

CARPENTERIA—Texas' McDougal 1, 34-4-25, core hole lcn.

GOLETA—General Pet.'s Hollister 1, 10-4-29, 13⅜-inch cas cmt 260 ft, will dr out cmt; More 3, 22-4-28, plugged to 4375 ft, td 6912 ft. Strickland and Tippett's Duncan 1, 19-4-27, will deepen from 4691 ft.

LOS ALAMOS—Barnsdall's Ceareaga 1, 31-8-33, dr shale 1600 ft. N. S. Wilson's Orena 1, 2-7-33, sd 3450 ft.

SANTA MARIA—O. C. Field Gasoline Co.'s Norswing 1, 8-9-33, may abn, td 5568 ft. Western Gulf's Bradley 1, 5-9-33, sdtr iron 8566 ft.

### VENTURA COUNTY

CONEJO—Sycamore Oil Co.'s Hansen 1, 24-1-20, dr mixed rocks 400 ft. Triunfo Oil Co.'s No. 1, 24-1-19, dr shale 2965 ft.

HOPPER CANYON — Bardeen Oil Co.'s Lankershim 2, 13-4-19, rigging rotary.

OJAI—A. N. Macrate's Cosmon 1, 27-4-23, lcn.

PIRU—Torrey-Canyon Oil Co.'s No. 1, 32-4-18, 13⅜-inch cas cmt 880 ft, td 930 ft.

RINCON—Woodruff Oil Co.'s Lomas 1, 4-3-24, lcn.

SANTA PAULA—San Pedro-Pt. Fermin Oil Co.'s Kellerman 2, 13-4-21, will put on pump, td 3905 ft.

SIMI—R. R. Renaud's Marr 17, 25-3-18, lcn.

### ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc, used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn — abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd — shut down; sdtr — sidetracking; sp — spudding; sr—straight-reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

SOUTH MOUNTAIN—H. H. Bell's Lemon 1, 22-3-21, dr shale 2215 ft.

### MISCELLANEOUS

KINGS COUNTY—Knudsen and Schmidt's Avenal 1, 36-23-17, dr shale 5722 ft. Eagle Oil and Gas Co.'s No. 1, 15-23-20, blowing gas at commercial rate, td 1125 ft. E. B. Guess' No. 2, 12-23-22, sd 2000 ft. Investment Equipment Co.'s No. 1, 18-22-19, rig. Irma Investment Co.'s Watson 2, 7-23-20, making production test, td 1225 ft. Kettleman Lakeview Oil and Gas Co.'s No. 1A, 20-23-20, sd 1196 ft. W. B. Niel's No. 1, 32-22-20, rigged to sp. Tulare Basin Oil Co.'s Goodfellow 1, 2-23-19, dr shale 1065 ft. Valley Exploration Co.'s Dudley 1, 12-23-19, dr out cmt, td 1302 ft.

NAPA COUNTY—Napa Oil Co.'s Griffith 6, 7-8-3, 8⅝-inch cas cmt 2850 ft.

SAN JOAQUIN COUNTY—Union's T. L. W. 1, 14-3-6, dr shale 4369 ft.

SAN LUIS OBISPO COUNTY — Trav-El Oil Co.'s No. 1, 7-32-22, co 2395 ft. Emerich Oil Co.'s No. 1, 13-28-12, dr shale 1740 ft. Indian Dome Oil Co.'s No. 1, 26-31-12, sd 3374 ft, will deepen.

TULARE COUNTY——Gravity Exploration Co.'s Hudson-Buck 1, 11-24-23, rig. E. B. Guess' No. 1, sdtr iron, td 6197 ft.

## KANSAS

SUMNER COUNTY — Trees Oil Co. & Shell's Springate 1, ne se sw 6-34-2e, dr by 10-in, td 2285 ft.

KINGMAN COUNTY — Panhandle Drlg. Co.'s Wetherall 1, c se nw sw 20-28-10w, 15-in 100-ft, casing trouble.

HARVEY COUNTY—Liggett et al's Davis 1, c sw se ne 7-24-1e, sd 2500 ft.

FINNEY COUNTY—National Ref. Co.'s Wells 1, sw c 12 23-30w, 8-in 3765 ft, sd 3805 ft.

RENO COUNTY—Jarvis & Wright's Rainbow 1, nw nw se 33-22-7w, lcn.

McPHERSON COUNTY—Twin Drlg. Co. et al's Farver 1, sw se 16-20-1w, T chat 2938; 8-in 2930 ft td.

BARTON COUNTY—Skelton Oil's Ott 1, c se se 16-19-14w, sd 3375 ft, s g, co, cas trouble.

RICE COUNTY—Gypsy's Steckle 1, c ne nw 31-19-10w, dr 2355 ft.

McPHERSON COUNTY—Shell's Johnson 1, se sw sw 35-19-3w, td 3046 ft; 13½ m gas 300-600 bbls S 1.

RUSH COUNTY—Shelton Schleagel's Brock-Hartman 1, sw se nw 4-18-12w, sp and sd.

MORRIS COUNTY—Allender et al's Wycoff 1, c sw se 5-17-7e, 659-61, td, SG&W; D&A. Urschell et al's Bersuch 1, c nw se nw 10-17-7e, td 915 ft, fsh bit.

ELLSWORTH COUNTY—Raymond Gear et al's Sauberli 1, c sw se 29-16-9w, sp and sd.

MORRIS COUNTY — Hankenson et al's Cessnum 1, sw se 24-17-9e, sd 2625 ft.

RUSSELL COUNTY—Tom Palmer et al's Pasek 1, c se, 3-14-11w, dr 2855 ft.

OSAGE COUNTY—Riggs-Smith's Wood 1, c se nw 31-14-15e, td 2200 ft.

RUSSELL COUNTY — James Brennan's Walz 1, cwl e½ nw 29-13-11w, rig. Twin Mounds Oil's Weis 1, c w½ ne nw 30-13-4w (owd) td 2710 ft, sd.

DICKINSON COUNTY—Severs et al's Livingood 1, ne sw 12-13-2e, sd 4752 ft.

SHERIDAN COUNTY—Flo et al's Shoemaker 1, se sw sw 27-27-26w, sd 4120 ft.

WASHINGTON COUNTY—Sincox's Penwell 1, nw se nw 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al's Unknown 1, sw c 3-2-35w, 6-in 3875 ft, hfw 3925 ft, sd.

## OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros' Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, sd 3693 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Vollmer 2, ne c se ne sw, sd 5640 ft.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey's Acre 1, c sw ne, sd 5502 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, se c nw, sd 5850 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma's Phillips 1, c nw sw, sd 5120 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al's Quier 1, se c sw, sd, 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Atkinson et al's Hays 1, se c ne, dr 2220 ft.

PAWNEE COUNTY—T 20n, R 5e, Sec. 6, W. A. Rookstool's Berry 1, nw c ne sw, sd 1951 ft.

LINCOLN COUNTY—T 17n, R 5e, Sec. 36, Mote et al's School land 1, nw c, sd 1160 ft.

LINCOLN COUNTY—T 11n, R 3e, Sec. 2, Hilton Phillips et al's Phillips 1, sw c nw, rur.

CREEK COUNTY—T 14n, R 7e, Sec. 18, Cal Cul's Holleyman 1, se ne se, dr 700 ft.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic's Beebe 1, nesw sw, dr 1300 ft.

LATIMER COUNTY—T 6n, R 19e, Sec. 16, P. English's Weaver 1, c nw se, sd 1542 ft.

PITTSBURG COUNTY—T 5n, R 14e, Sec. 9, W. B. Hailey's Coal land 1, ne c sw, sd 820 ft.

ATOKA—T 1n, R 13e, Sec. 31, Campbell, Baird 1, nw c sw, machine.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, St. Joseph 1, sw c se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

POTTAWATOMIE COUNTY—T 6n, R 4e, Sec. 2, Mid-Continent, Farmer 1, se c sw nw, sand 4418-31 ft, 3500 ft wtr. PB & rip pipe.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co., Williams 1, c sw, sd 5150 ft. T 11n, R 26w, Sec. 4, J. J. Rook and Palmer, Davis 1, c nw ne, (owd) dr 3420 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 9n, R 17w, Sec. 23, Miley Pet. Corp., Chapman 1, ne c sw, rig. T 8n, R 19w, Sec. 29, Cooper and Terhune, Blocker 1, nw c, sd 2757 ft. T 8n, R 18w, Sec. 21, Burns & Prince, Docks 1, sw c, sd 1265 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffel 1, nw c, sw 1745 ft. T 7n, R 21w, Sec. 23, French et al, Murphy 1, sw c nw se, sd 1654 ft.

CADDO COUNTY—T 5n, R 9w, Sec. 6, Mid-Kansas and Ramsey, Culp 6, nw c, ne, td 10,079, small sho o and g, pb 6780 ft, shot 80 qts 6750-80, no sho; pb 6094 ft, ripped pipe at 6077-89 ft, sho 10M gas and 20 bbls saltwater.

COMANCHE COUNTY—T 4n, R 12w, Sec. 33, Snodgrass et al, Willetts 1, ne c nw, sd 515 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee, Phillips 1, ne c sw, sd 4800 ft.

COAL COUNTY—T 1s, R 8e, Sec. 2, Rabiat Oil Co., Richardson 1, ne c nw, sd 1450 ft.

ATOKA COUNTY — T 3s, 10e, Sec. 18, Brookshire et al, Quinn 1, nw c, sd 1720 ft.

LOVE COUNTY—T 6s, R 2e, Sec. 27, Batson et al, Cross 1, ne c nw ne, td 1651 ft, D&A.

## LOUISIANA GULF COAST

ACADIA PARISH — Yount-Lee Oil Co.'s Housierre Latrielle 10, Evangeline, 47-9s-2w, td 8620 ft, lost 100 ft hole when r.

CALCASIEU PARISH—Gulf Ref. Co. of La.'s Lutcher Moore 29, td 1135 ft, pumping oil and sulphur water. Union Sulphur Co.'s Fee 768, lcn 375 ft n and 138 ft w of se cor sw¼ nw¼ Sec. 29-9s-10w; Fee 769, lcn 295 ft s and 918 ft w of c of Sec. 29-9s-10w. Hill Oil Co.'s Vincent 1, Sec. 25-10s-10w, dr gbo 2734 ft. Shell Pet. Corp.'s F. Heyd 2, Iowa, set 13⅜-in cas 1165 ft. Marrs McLean's F. H. Gray 9, Vinton, td 2300 ft in os, will deepen.

CAMERON PARISH—Brownie-Babette Oil Co.'s R. A. Moore 1, Black Bayou, mov in rig. Union Sulphur Co.'s Pure Oil 1, 11-12s-10w, 3374 ft, sn and sh; Gulf Land Co.-Humble Ls. 1, dr 4840 ft sh.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 27, Jefferson Lake, dr in cap rock, showing sulphur at 720 ft; Lake Peigneur 28, cemtd 10-in in cap rock at 960 ft.

IBERVILLE PARISH—Standard O. Co. of La.'s Myrtle-Grove-Wilbert 2, Bayou Choctaw, td 1025 ft, cemtd 13⅜-in cas; Gay 2, Bayou Choctaw, dr 4360 ft; Schwing 5, Bayou Blue, fsh, td 2990 ft; Schwing 7, dr gbo 3050 ft.

Jefferson Davis Parish—Shell Pet. Corp.'s O. A. Fontenot 1, Iowa dist, ru.

LA FOURCHE PARISH—The Texas Co.'s L. L. E. Leesville 4, Leesville dist, ru. Pap Oil Co.'s Esponge & Wizer 1, Leesville dist, dr 2400 ft, cavity. State Prod. Co.'s Dibert-Starck-Brown C, Chacahoula dome, dr 345 ft, sn and sh.

PLAQUEMINE PARISH—Humble O & R Co.'s Cockrell-Moran 7, Lake Grande Ecaille dist, set 9⅝-in cas at 1163 ft, td 1174 ft, trace of oil.

ST. LANDRY PARISH—Gulf Ref. Co.'s Wilson Cochran 1, set 10-in cas at 930 ft, td 1650 ft. Port Barre Oil Co.'s Sibille 1, Port Barre dist, sp and sd.

TERREBONNE PARISH—The Texas Co.'s State 5, Dog Lake, bldg fndtn; State 6, Dog Lake, lcn; Lake Barre 12, Lake Barre dist, ru; L. L. E. Lake Barre 2, Lake Barre, lcn; L. L. E. Lake Barre 3, lcn; State Lake Pelto 5, td 1765 ft, sn showing oil, woc on 37 ft of screen on bottom. United Gas Pub. Serv. Corp.'s Minor 2, 13 mi nw Houma gas field, dr sandy shale 4503 ft.

VERMILION PARISH—Pure Oil Co.'s Alliance Tr. Co. 2, Gueydan, dr 2700 ft sandy shale and shell.

WEST FELICIANA PARISH—Como Oil & Dev. Co.'s M. B. Woods 2, 54-1s-4w, dr 2880 ft shale.

## NORTH LOUISIANA

| Company, Well and Location | Initial Production Bbls. | Depth |
|---|---|---|
| SABINE PARISH— | | |
| Coats Pet. Co., Parie 1, 2-7-13 ..... | 375 | 2405 |

BOSSIER PARISH—H. I. Morgan et al's Strange 1, ne sw sw 23-19-11, 10-in 123 ft, cemt 6-in cas 1721 ft, 8 ft sand, td 1735 ft. Plain Dealing O&G Co.'s Nattin 1, 15-22-14, 4½-in cas 2882 ft, 150 ft oil in hole, wosr 2890 ft. Dr. Hankins et al's Newell 1, 12-19-11, sd 1730 ft.

CADDO PARISH—Pelican Nat. Gas Co.'s Cooper 1, 29-18-14, ta 3648 ft red shale and lime. Louanna O&G Co., Inc.'s Hammock 1, se se 32-19-16, 10-in 102 ft, dry in ds test 927-32 ft, dr 1200 ft. Calatex O&G Co.'s Hudson 1, 8-16-16, rig.

CALDWELL PARISH—Monroe Pet. Corp.'s Burton 1, 36-12-2e, sd acct titles, 2986 ft. Carter Bell et al's Taylor 1, 17-14-4e, 12½-in cas 110 ft, sd 1100 ft acct high water.

DE SOTO PARISH—A. R. Smith's Horn 1, nw se 15-12-16, sp and sd. Rellit O&G Co.'s Cannon Hrs. 1, 12-11-16, sd 1965 ft. E. T. Oakes' Johnson 1, 30-13-15, dr 3127 ft, lime rock. Walters & Nicholson's Jim Guy 1, 3-11-13, sd 1260 ft. De Soto Dev. Co.'s Nickie 1, sw se 7-13-12, dk.

NATCHITOCHES PARISH—C. M. Talley etal's Talley 1, 29-11-10, sd 1380 ft. J. W. Cooper et al's Cooper 2-A, 35-11-10, sd 1515 ft. Gerson et al's Smith Island 1, sw nw sw 11-10-8w, 12½-in cas 90 ft, gas and sw flow killed, arr skid over for new hole, td 585 ft sand. R. A. Keator's Stephens 1, 25-10-6w, 12¼-in cas 178 ft, sd.

OUACHITA COUNTY—S. C. Wilson et al's W. L. Williams 1, sw se 5-16-1e, 12¼-in cas 180 ft, sd 1890 ft shale.

RICHLAND PARISH—National Gas Co.'s Singletary 1, 20-18-7e, sd 2515 ft.

SABINE PARISH—J. J. Kean's Belton 1, nw se ne 31-9-13, 8-in cas 1590 ft, at top chalk, base chalk 2115 ft, dr 2715 ft. R. L. Gay, Tr.'s Long-Bell A-1, nw nw 10-8-13, top Glen Rose 4220 ft, dr 4714 ft shale and lime. Coats Pet. Co.'s Stille 1, nw se 35-8-13, lcn. Hill 1, se se 35-8-13, lcn. Parie 1, ne se 2-7-13, 10-in 100 ft, 6-in 2066 ft, 4¼-in 2071 ft, top marl 2066 ft, top chalk 2092 ft, gauged 375 bbls oil daily through 7/16-in choke with 50 pounds pressure, td 2405 ft chalk. S. Martinez 1, se ne 3-7-13, lcn. Southland Drilling Co.'s F. Martinez 1, ne nw 11-7-13, sp, dr 1400 ft. F. Martinez 2, 11-7-13, dk. G. Martinez 1, sw sw 2-7-13, dk. Patterson 1, sw sw 2-7-13, dk. Mansfield Hdw. 1, sw se se 36-8-13, 10-in 100 ft, cemt 6-in cas 2070 ft. Hudson & Bird's Walden 1, sw ne 26-8-11, elev 290 ft, 10-in 100 ft, top marl 2355 ft, top bro chalk 2440 ft, sd 2454 ft chalk. Zeke Lohman's McCormick 1, ne sw 2-7-11, sd 1606 ft. Roy Baker's Sabine 1, 11-7-12, wosr 2548 ft. Gautier et al's Meshell 1, 30-8-12, wosr 2599 feet. Loring Oil Co.'s Bowman-Hicks 18, sw nw 15-7-12, elev 264.1 ft, 15½-in cas 100 ft, 9¾-in cas 3950 ft, top marl 2482 ft, top chalk 2537 ft, top lower Cretaceous 4000 ft, used 1875 sacks cement shut off sw flow 4300-34 feet, sdtr at 4350 ft, dr 4370 ft, old td 4428 ft. Roof Ref. Co.'s Peterson 1, sw ne 34-7-13, 10-in 40 ft, arr res td 2243 ft. G. M. LeGrand's McGough 1, 3-8-10, dk. O. J. Baird's Duggan 1, se nw se 14-7-11, 6-in 2410 ft, dry, wo 2576 ft. W. F. Lacey's McNeely 2, ne ne 14-7-11, rig. Pelican Nat. Gas Co.'s Buckley 1, sw sw 6-7-10, 10-in 100 ft, 6-in 2438 ft, dry, oil show 2554 ft, dry 2562 ft, sd, wo 2800 ft. Beene et al's Ezernack 1, sw ne ne 2-7-13, dr 1300 ft. Farrell et al's Haley 1, 6-7-12, rig. C. H. Tuttle's Byrd 1, nw nw 7-7-10, 10-in cas 102 ft, cemt 6-in 2442 ft. Service Royalty Co.'s Gardner B-1, sw nw 7-7-10, 10-in 102 ft, 6-in 2460 ft, dry, wo 2571 ft. Baird & Stone's McNeely 1, 14-7-11, rig. J. E. Smitherman's Smith 1, sw nw 7-7-10, 10-in 100 ft, dr 2300 ft. Ohio Oil Co.'s Bowman-Hicks 14, nw sw 3-7-12, 10-in 129 ft, cemtd 6-in 2326 ft. Frank Foster, Inc.'s Stevens 1, ne nw nw 20-9-11, lcn. W. M. Coats' McNeely 2, nw ne 14-7-11, lcn. Stovall Drilling Co.'s Nulton 3, se ne 2-7-13, lcn.

TENSAS PARISH—A. R. Willis' Curry 1, 39-11-12e, sd 3545 ft. Stovall Drilling Co.'s Miller 1, ne sw 10-10-10e, lcn.

## ARKANSAS

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, 4-20-8e, sd 1260 ft.

CLEBURNE COUNTY—Frank S. Craver's Donithan Lbr. Co. 1, 33-11-9, sd 3740 ft.

CLEVELAND COUNTY—Crum & Stillwell's Bell 1, 10-10s-12w, rigged up and sd.

COLUMBIA COUNTY—Kendall Oil Co.'s Fullenwider & Kitchen 1, ne ne 13-17-22, sd 814 ft.

DALLAS COUNTY—Zepp O&G Co.'s Hillman 3, nw ne 20-10-13, lcn. Jno. James, Tr.'s, Fordyce Lbr. Co. 1, 11-9s-15w, sd 2520 ft.

DREW COUNTY—Co-operative Dev. Co.'s Ogles 1, ne nw 35-15-5, sd 1890 ft.

HOT SPRINGS COUNTY—Starr Oil Co.'s Cunningham 1, 11-5-16, 12½-in cas 62 ft, sd 1262 ft, shale and bldrs.

LINCOLN COUNTY—L. B. Cook, Tr.'s, McGehee Pltg. Co., 15-8s-7w, sd 2985 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MILLER COUNTY—W. E. Noel et al's Dickson 1, 11-20-27, sd 1955 ft shale and gmbo. Fitzwater et al's E. L. Beck 1, sw se 33-15-26, sd 2220 ft.

OUACHITA COUNTY—W. H. Copenhaver et al's Berg 1, se se 13-15-17, 10-in cas 42 ft, sd 2011 ft.

PIKE COUNTY—Kentucky-Ark. O&G Co., Inc.'s, Tilyou 1, 26-8-24, ta 2920 ft. East 1, 13-9-23, 10-in cas 288 ft, dr 1287 ft hard gray lime.

PRAIRIE COUNTY —Powell Creek O&G Co.'s Kloss 1, ne nw 3-4n-6w, partly rigged up and sd.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1436 ft. Waldron O&G Co.'s J. G. White 1, 17-3n-29w, sd 1860 ft (sec. hole.)

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd 1536 ft.

SEVIER COUNTY—Tri-State O&G Co.'s Bank of DeQueen 1, 34-8s-32w, sd 950 ft.

UNION COUNTY — Southern Prod. Co.'s Wingfield 1, 16-19-15, sd 2608 ft. Lion O. R. Co. et al's Guy P. Hayes A-9, ne ne 4-16-15, elev 96 ft, sd acct high water, while trying recov hung ds, td 7255 ft, salt. Drillers Oil & Dev. Co.'s Pickering 1, 1-17-16, wosr 2434 ft. Modisette et al's Union Sawmill 1, sw nw 13-18-13, 10-in cas 167 ft, top sand 2266 ft, tested sw, slight oil show 2266-80 ft, sd 2280 ft. Hill et al's Barnes 1, ne ne 21-19-15, dk.

WASHINGTON—C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-12, ta 5640 ft.

## MISSISSIPPI

CHICKASAW COUNTY—Hightower & Golson's Fleming 1, 20-13-3e, ta 1640 ft.

HINDS COUNTY (Edwards Dist.)—Miss.-Minn. Oil Co.'s Edwards Land Co. 1, sw ne 23-6n-4w, mov in rig.

JASPER COUNTY (Bay Springs Dist.)—Bay Springs Pet., Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, co td 3139 ft Wilcox.

LAMAR COUNTY (Purvis Dist.)—Stauffer & Kouri, Tr.'s Bond 1, se ne 18-2n-14w, mov in rig.

LOWNDES COUNTY — Lowndes County O&G Co.'s Carr Est. 1, ne nw 34-17n-16e, rig.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-15-19, ta 3007 ft brown sand. P. J. McAlpine's Cowart 1, 2-12s-19w, 5 3/16-in cas 3420 ft, ta 3793 ft, brown sandy lime.

NEWTON COUNTY (Newton Dist.)—Dalton Dev. Co.'s Majure 1, se se 25-6n-11e, 10-in cas 295 ft, sd 1420 ft.

NOXUBEE COUNTY (Macon Dist.)—Thompson O&G Synd.'s Donahue 1, se ne 25-16n-17e, elev 280 ft, 12½-in cas 20 ft, 8¼-in cas 1605 ft, has alkali water, wo td 1735 ft. Ames 1, nw nw 24-16-18e, dk pat.

RANKIN COUNTY (Jackson Dist.)—Atkisson & Dyer's Valentour 1, nw nw 18-5-2e, elev 270 ft, sd wo cas 2428 ft. Majestic O&G Co.'s Elton Lbr. Co. 1, 10-4n-3e, dk.

SCOTT COUNTY—Culley et al's Owen 1, 2-8n-9e, dk.

SHARKEY (Nitta Yuma Dist.)—United Gas Pub. Serv. Co.'s Lenhart 1, sw se 14-14n-6w, elev 100.6 ft, sp and sd to finish rigging up.

WARREN COUNTY (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, sw ne 9-18-2e, sd 2607 ft.

WEBSTER COUNTY—P. J. McAlpine's Henley 1, se nw 15-21-11e, cored gravel, sd 1800 ft.

## ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, no report.

SUMTER COUNTY (Livingston Dist.)—Forked Lightning O&G Co.'s Nixon 1, 30-20-2w, dk.

WASHINGTON COUNTY—Hobson et al's Hobson Bros. 1, 9-8-2w, ta 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, ta 700 ft.

## TENNESSEE

CHESTER COUNTY—Gilmore et al's Scott 1, sand 558-570 ft, 10-in cas 552 ft, dr 582 ft (no recent report.)

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, arr rest, td 2511 ft.

## COLORADO

ADAMS—Hills Dome Lease Dev. Co., se 27-3s-54w, wait for fuel to res, td 3790 ft.

ARAPAHOE—McDeb Cr. Co.'s Fitzsimons 1, ne 7-4s-66w, sidetr bailer, td 5911 ft.

BOULDER—Julius Williams' Degge 1, 6-1n-71, dr bel 1250 ft. Ahlstrand etal's Woodley 1, nw 8-3n-70w, sd 565 ft.

ELBERT—Belmont Oil Co., sw 27-3n-64w, sd 3745 ft. Progressive O & L Co.'s Pease 1, se 27-10s-66, sd 3820 ft.

EL PASO—Gulf States Oil Corp.'s Carson 2, ne 10-16-66, sd 1126 ft.

GRAND—Oil Mineral Lands, Inc.'s McElroy 1, sw 14-2-81w, sd 545 ft.

JEFFERSON—Ruby Hill O & G Co.'s Braden 1, se 34-4s-59w, sd 4106 ft.

LA PLATA—McGarr Pet. Co.'s Pinon Mesa

1, ne 34-33-12, rig up. J. W. Irwin & Co.'s Doescher 1, nw 29-33n-13w, sd 3175 ft. Phipps et al, sw 9-33-13, td 520 ft.

LARIMER—Mayer et al's Reed 1, nw 28-4n-69, install new boiler, 2752 ft. Natural Gas & Oil Co.'s Meade 1, se 17-4n-69w, sd 1900 ft. Colo. Prod., Inc.'s Foster-Motz 1, se se 17-4-69, cemt cave, sd 1435 ft. Colo. Prod., Inc.'s Hogsete 1, set ne 20-4-60, sp and sd. C. Leonard Smith's State 1, 36-12n-70, prep to res, td 760 ft. Poudre River Oil Co., se nw 34-8n-69w, co to res, 1996 ft. Consolidated Drg. Co.'s Maxwell 1-A, ne 25-8n-70, co to res at 285 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, co 60 ft off bottom at 3449 ft.

MOFFAT—Ohio Oil Co.'s Bogenschultz 1, se 9-6n-91, dr 2100 ft.

MORGAN—Badger Creek O & G Co., sw 2-2-57, sd 1340 ft.

PARK—So. Park O & G Co.'s Milligan 1, se 13-8s-76w, co 2680 ft after cemt cave. South Park O & G Co.'s Esche 1, ne 5-9s-76w, sd 2442 ft.

PUEBLO—Anchor Oil Co.'s Esely 1, sw 35-22-67, suspended operation at 820 ft.

RIO BLANCO—California Co.'s Raven 1, se 20-2n-102, dr 3584 ft.

ROUTT—Mid-Colo. Pet. Corp.'s Omholt 1, se 29-4n-97, sd 1700 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, sd 1503 ft.

WELD—Retter Oil Co.'s Smith 1, 14-1n-68w, sd 1385 ft. Conoco's Gadbois 1, sw 24-6n-61w, prep to swab, td 6701 ft. Greeley Oil Co.'s Gadbois 1-B, nw 25-6n-61w, 30 bbls per day.

## NEW MEXICO

BERNALILLO — Norrins Realty's Pajarito Grant 1, 29-9n-2e, dr in wash 1210 ft, 12¼-in cas at 1150 ft.

CHAVES—Warman Oil Trust's Evans 1, 15-14s-25e, dr 702 ft.

DE BACA—Matador Oil Co.'s Wood 1, ne 6-4n-20e, dr 3500 ft. Landowners Oil Co.'s State 1, ne 16-1s-27e, dr 4680 ft after recovering tools.

GUADALUPE—N. M. Prod. & Ref. Co.'s McMillan 1, 24-5n-16e, ur 8¼-in, td 3875 ft.

LEA—Baker Oil Co., Inc., sw nw 15-13s-33e, lcn.

LUNA—Angelus O & M Co.'s State 3, se 30-21-10, sd cemt, td 6171 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, sd 1445 ft. Pasotero Oil Corp.'s Evans 1, sw 32-5s-30, rig.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. Governador Oil Co.'s 1, 15-29n-7w, dr 2005 ft, carry 5 3/16-in casing.

ROOSEVELT—Peterson et al's Good 1, 32-5s-30e, rig up.

SAN JUAN—Kutz Canon O & G Co.'s Day 1, se 20-28n-10w, sd 3742 ft. Rio Grande Dev. Co. 2, 9-26-11, sd 1771 ft. Continental Oil Co.'s Rattlesnake 24, 1,29n-19w, fsh 6620 ft. San Juan Leaseholds' Bowman 3, nw 30-30-15, sd 2685 ft. Williams et al's Stallings 1, sw 17-25n-15w, sd 150 ft.

SANTA FE—Jones, Owsley et al, 5-10n-9e, sd 435 ft. N. M. Securities Co., sw 6-10n-7e, sd 480 ft.

SAN MIGUEL—Starr Oil Co.'s Adams 1, ne 25-17n-16e, fsh pipe 5095 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 21-12n-22e, dr 1700 ft.

## WYOMING

CARBON—Midwest Refining Co.'s U. P. 27, 27-11-81, sd for winter. Prairie O & G Co.'s Bunker Hill 1, 29-27-87, sd for winter, td 6147 ft.

CONVERSE—John Ackard, se 24-33-72, sd 1820 ft.

CROOK—Northwestern Oil & Natural Gas Co., 6-54-60, sd 1585 ft for winter.

FREMONT—Wiebolt et al, 35-33-99, td 2715 ft. Ward O & G Co., 28-34-90, new location. Yellowstone Oil Co., sw 14-39-94, 1000 ft last report.

LINCOLN—Wyo. Prod. Co., 14-24-113, td 1700 ft.

NATRONA—Midwest's 11, nw 32-34n-77, abn 6210 ft in Lakota; dry. Summit Oil Co., 21-33-80, sd 1387 ft. Wyo. Imperial Oil Co., sw 13-33-79, rig up.

NIOBRARA—Fall River Royalties & Internat'l O & R Co.'s Joint Globe 1, 2-39-61, sd 600 ft.

WASHAKIE—Ohio Oil Co., lot 14, 19-45-92, abn after plug back from 8596 ft. Bales Oil Trust, nw 31-48-80, sd for winter at 1100 ft.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, sd 1250 ft (corrected depth). Julius Peters et al's Weitzell 1, se nw 30-46-64, co at 3400 ft to dr 100 ft deeper. Stockade Anticline Synd., 32-45-60, sd. Gose Oil Synd.'s Gose 1, 28-47-65, sd 5050 ft.

## MONTANA

CARBON—Corbett Roy Co., sw se 1-6s-23e, show oil at 1100 ft. Jack Creek O & G Co. 1, se 15-7s-23e, td 1325 ft. Ohio Oil Co.'s Kutchinski 1, 15-7s-21e, dr 1300 ft.

CARTER—E. T. Moorehead, sw 36-4s-57w, sd.

CASCADE—Buscher & Cassady's Johnson 1, se 19-22-3e, boiler on ground, td 1380 ft. Charles Merz et al's Sheffels 1, nw 4-21-4e, ur 8-in for wso, td 1050 ft.

FERGUS—Melton Corp. 1, sw 24-21n-17e, dr 3100 ft last report. Probably sd now. Landheim Romundstad 2, ne 3-17n-20e, set 6⅝-in at 2116 ft, sd 2600 ft.

GALLATIN—Mont. Gas & Pet. Corp.'s Adams 1, 35-1n-2e, sd 527 ft. Gallatin Valley Oil Co.'s Haglund 1, sw 13-34-6w, sd 2539 ft.

GLACIER—Fulton Blackfeet Oil Co., ne 28-36-12w, sd 2885 ft, bad weather.

GOLDEN VALLEY—Golden Valley Oil Co., 28-6n-22, dr 2800 ft last report.

LIBERTY—Northland O & G Corp.'s Yurman 1, sw 32-33-5e, dr 3790 ft. California Co.'s Ross 1, ne 3-33-6e, dr 2515 ft.

MUSSELSHELL — Minn.-Flatwillow Pet. Co.'s 1, sw 7-11-31e, to res, td 2556 ft.

SWEETGRASS—Shoshone Cons., nw 23-2n-15e, strmmg around 5500 ft last report.

TETON—California Co.'s Sullivan 1, nw 34-28-7w, sd for winter, td 2810 ft. Earl Oil Corp.'s Gad 1, se 22-22-8w, sd for winter 2850 ft.

TOOLE—Oregon Synd., se 20-36-2e, ur to bottom at 2269 ft. Western Nat'l Gas Co., nw ne 26-37-4e, averaging 20 bbls per day, td 1813 ft, will probably be drilled deeper.

YELLOWSTONE—Pan-American Oil Synd., 23-2s-24e, sd 2360 ft. Peter Antonioli, ne ne 21-2n-25e, td 2150 ft.

## EAST TEXAS

HARRISON COUNTY—Ryan Cons. Pet. Corp.'s J. M. Furrh 1, T. J. Copelain sur, rig. J. M. Gholson's Bivins 1, T. D. Peterson sur, sd 3085 ft. Lloyd Oil Corp.'s Timmons 1, Jno. Findley sur, 10-in cas 240 ft, sd 4195 ft, lime and anhydrites.

MARION COUNTY—Baunauch Dev. Co.'s Miller 1, Henry Fulgram sur, top Saratoga 2260 ft, top PG 2480 ft, coring 2700 ft chalk.

PANOLA COUNTY — Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, sd 3264 ft shale. Moses & Wallace's C. L. Daniels 1, Isabel Hanks sur, sd 650 ft. Hoffer et al's Cameron 1, W. A. LaGrone sur, dk. Davidson et al's Latham 1, Wm. Rich sur, 10-in cas 260 ft, base chalk 2095 ft, sd 2334 ft. Nelson et


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al's Williams 1, Jas. Hanks sur, 12½-in cas 400 ft, sd 3055 ft, shale and lime. Stamps et al's Chadwick 1, Wm. Scantleberry sur, rig.

SABINE COUNTY—Rogers & Johnson's Polley 1, Jno. Horton sur, sd 250 ft.

SHELBY COUNTY—E. L. Chapman's Holt 2, Matthew Moore sur, 10-in cas 103 ft, dr 2200 ft shale (sec. hole). McRobie et al's Windham 1, Wm. Leach sur, 296-ac tract, 12½-in cas 276 ft, top PG 1930 ft, 8¾-in cas 1750 ft, slight gas show 2282 ft, base chalk 2572 ft, dry, slight oil show 2686-92 ft, 9-ft saturated core recov 3360-69 ft, 6⅝-in cas at 3366 ft, parted, sd while trying pull, td 3393 ft. Mauldin et al's Frost Lbr. Ind. 1, A. B. Fountain sur, co, td 3246 ft. H. H. Gracey's J. A. Morrison 1, Wm. English sur, sd 2600 ft. C. H. Tautenhahn's J. C. Bogard 1, Thos. Baker sur, sd 20 ft, partly rigged up. Ridegway et al's Polley 1, Domingo Gonzales sur, 10-in cas 112 ft, sd, wo, cas 822 ft. K. H. Francis' Jno. Mims 1, Mary Smith sur, top Midway 847 ft, 6⅝-in cas 2817 ft, sd 3334 ft. Oil News Pub. Co.'s (Stimpson & Lewis), Pickering 1, C. H. Patterson sur, 361 ac tract, 10-in cas 108 ft, pumped baroids to hold in after oil and gas show, 8-in cas 1463 ft, td 1495 ft, lime. Ray & Dunbar's Hayden 1, D. F. T. Yordt sur, 153 ac tract, rig.

## SOUTH TEXAS

ARANSAS COUNTY—Big Lake Oil Co.'s Giesecke 1, St. Joseph's Island near Aransas Pass, lcn.

ATASCOSA COUNTY—American Central O&G Co.'s McConnell 2, blk 138, Baker sur, dr below 1700 ft.

BASTROP COUNTY—Birdwell et al's White 1, Nancy Roberts sur, 4 mi se Bastrop, td 550 ft at last report. Humble O&R Co. and Sun Oil Co.'s Powers et al 1-B, blk 197, 4 mi ne Bastrop, coring 3025 ft. E. R. Marts & Beavens' Wm. Bahm 2, 350 ft e No. 1, J. Standifer sur, ru. Texas Dev. Co.'s C. H. Ray 1, Thos. Christian sur, 1½ mi ne Elgin, abn 2660 ft, show sulphur water in Edwards.

BEE COUNTY—Buck Oil Corp.'s George Ray 3, nw cor of lease, s offset Gremmel 2, Williamson sur, Pettus (Damac) dr 1020 ft. Coastal Oil Finding Co.'s Handley 1, 12 mi sw Beeville, ru. J. M. Davis et al's Geo. Ray 1, 1000 ft sw discovery, Jno. Williamson sur, Pettus (Damac) dr 3400 ft. Humble O&R Co.'s Laura Thompson 1, Garrett Roche sur, sd 5310 ft. McMurray et al's (Formerly Weinert) Geo. Ray 1, Jno. A. Williamson sur, sand 3894-3900 ft, 6⅝ inch cas 3892 ft, comp 864 bbls. Mauldin et al's Fee 1, sw cor 16-a tract, Geo. A. Kerr sur, ru. Slick Selingson, Inc.'s Geo. A. Ray 4, n offset Portis 3, G. A. Kerr sur, Pettus (Damac) dr 3220 ft; Geo. A. Ray 5, e oset Ray 3, to spd. The Texas Co.'s L. Gremmel 3, John Pace sur, w offset No. 2 Pettus (Damac) sand 3880-90 ft, flow 1560 bbls; Gremmel 4, w offset No. 3, lcn; Gremmel 5, w offset No. 4, lcn.

BEXAR COUNTY—Amsden, Ingersoll & Miller's Stemburg, 9 mi sw San Antonio, F. Rolen sur, dr 550 ft. S. W. Blount's S. A. Land & Dev. Co. 1, 1 mi e Medina river on Palo Alto rd, 12 mi s San Antonio, sd 520 ft. Jno. T. Callahan's J. H. Buch 1, J. W. McCamley sur, 9 mi w S. A., td 650 ft, no later report. Chiquita Oil Co.'s (Witherspoon) W. H. Cooksey 3, J. W. Rialls sur, Cooksey, lcn; Pieniazek 1, Steele sur, 1000 ft sw pool, bailing 1500 ft. Eckert et al's Edward Heirs 1, Martinez sur, 8 mi se San Antonio, Gonzales rd, dr 1600 ft; Brehm 8, Martinez sur, Eckert pool, no report. Gatlin Oil Co.'s I. A. Beck 10, J. Montez sur, Eckert pool, completing at about 800 ft. Ewell Neill's J. M. Watson 1, Martinez sur, 10 mi s San Antonio, show sulphur water 2328 ft. Schneider, Rees et al's Claussen 1, ne San Antonio, SJ&A sur No. 17, sd 1143 ft. Van Duyn et al's Bradden 1, 1 mi n Medina river, 8 mi w San Antonio, dr 810 ft.

BLANCO COUNTY—Hardy Sitton's Standeford 1, sur 155, 3¼ mi sw Blanco City, td 1260 ft. Thomas Hicks et al's Specht & Wiedner 1, Thos. M. Fowler sur No. 27, 2 mi s Twin Sisters, sd 1635 ft.

CALDWELL COUNTY—Joe Bruner's Malone 1, A. Floyd sur, 2, lcn s Salt Flat, sd 2702 ft. T. W. Cole's J. M. Pierce 1, S. Seal sur, n Dunlop wells, dr 750 ft. Detroit Texas Dev. Co.'s (M. O. Rayor) Dunlop 2, Soloman Seal sur, 2¼ mi ne Luling, sd 2503 ft. Rex Kendricks et al's Virgil Carter 1, Isaac Allen sur, 3 mi sw Lytton Springs, ru. Meyer Exploration Co.'s Walker 1, Solomon Seal sur, 3 mi w and n of Luling, dr 170 ft.

DEWITT COUNTY—C. R. & M. and Weinert's Tom 1, on A. W. Talk ranch, 1 mi sw Slick pool, set 250 ft surface cas, re-dr.

DUVAL COUNTY—Cole Pet. Co.'s Benavides 75, Blk 8, sur 19, Mariano Arispe Grant, Cole-Bruni pool, dr 1900 ft. Frank Garvis et al's Schallert 2, Blk 10, Cain & Smith sur 55, Palangana Salt Dome, dr 1700 ft. O. W. Killam's Sutherland 1, sur 7, dr 2420 ft; Peters 1, sur 1, ru. Magnolia Pet. Co.'s (Texas) Duval County Ranch Co. 1-B, Sec 96, 1 mi s and 5 mi e S.R.C., dr 1875 ft. R. A. Thompson's Parr 1, San Andreas Grant, dr 2212 ft.

FRIO COUNTY—Arthur H. Wray's Roche 1, Sec 123, A. Hutzler sur, near Big Foot, 1500 ft sw Burns 1, abn 3707 ft.

GOLIAD COUNTY—Benedum and Trees and Plymouth Oil Co.'s Park 1, BS&F Sur No. 8, 2900 ft se Gibson Parks 1, sd 4555 ft for orders. Hoffman & Gooch's Fromme 1, (formerly Rheimer Schneider) 10 mi n Goliad, Peter Dexter sur, originally abn 2302 ft, ru to deepen. L. Neal et al's Pettus 1, J. M. Pettus tract, Pedro Trevino sur, w Goliad, re-dr, now at 4200 ft.

GUADALUPE COUNTY—Barnhill et al's Hoffman 1, DeWitt sur, between Seguin and Darst Creek, sd about 1760 ft. Humble O&R Co.'s Sue Denman 3-C, Wm. C. Arrington sur, Darst Creek, ru.

HIDALGO COUNTY—B. H. Adams' (Barrett & Kanellos) J. D. Brock 1, Blk 15, Porcion 79, 15 mi nw Mission, coring 2713 ft. Davenport et al's Wells 1, 30 mi w Mission, ru. La Joya O&G Co.'s W. L. Hart 1, w part of county, coring 4239 ft. Dayle L. Smith Oil Co.'s Ferandtz 5, Porcion 75, 21 mi w McAllen, sd 4026 ft; Daskman 3, 900 ft w Fernandez, dr 760 ft. San Roman Oil Co.'s (W. A. Taylor ) Lomax 1, Share 15, set 486 ft 12½ in cas, re-dr.

JIM HOGG COUNTY—L. W. Conner et al's Holbein 1, blk 7, sur 7, Reuben Holbein Oil Lease, sub of share 3, Las Animas Grant, dr 1345 ft. R. F. Foree et al's Holbein 1, blk 54, sur 9, Reuben Holbein oil lease sub of share 3, Las Animas Grant, abn 2501 ft. T. P. Morgan's Fee 1, Share 19, Palo Blanco Grant, dr about 1500 ft. O. W. Killam's Hinnant 1, Sur 164, Randado field, dr 1835 ft. United N &S Oil Co.'s Gutierrez 1, Blk 325, E. M. Doty sur, Charco Redondo Grant, coring 1930 ft.

JIM WELLS COUNTY—Gulf Prod. Co.'s Schaeffer 5, sur 89, dr 2700 ft. Magnolia Pet. Co.'s Seelingson 1, 15 mi s Ben Bolt, 8¼ inch cas set 3415 ft, sand 3414-51 ft, show little oil and sw now dr 3505 ft.

KERR COUNTY—Evans and Gant's Jeff Love 2, sec 1593, ½ se discovery, sd 5849 ft; Jeff Love 3, J. Martinez sur No. 1594, just e Love 2, lcn. Herbert & Halbert's J. D. Witt 1, W. H. Hamilton sur, sec 1923, td 100 ft, prep to deepen.

KLEBERG COUNTY—Joiner et al's (Barbee and Hunter) J. D. Finnegan 1, el Pasidio Sur, 7 mi s Kingsville, sd 4007 ft.

LIVE OAK COUNTY—Houston Oil Co.'s Cartwright 24, J. M. Colchado sur, Mt. Lucas field, sand 5290-5323 ft, completing. Coquat et al's (Phillips Pet. Co.) Sanger 1, 1280 ft nw No. 1, lcn to be made.

MAVERICK COUNTY—I. N. Boicourt's Bandera School Land 2, sd 2284 ft. K. B. Couch's Y. P. Yoas 1, dr 200 ft. Texas Gas Utilities Co.'s Chittim 8, sec 129, blk 7, I-GN sur, Chittim Field, sd 4875 ft.

McMULLEN COUNTY—Jacob, Buzzini & Pickett's Brewer 1, 21½ mi n Jacob 1, Spark sur, Wichett Blk, dr 600 ft. V. G. Schimmel's F. A. Hale 2, 300 ft No. 1 sur 63, Three Rivers ranch sub, dr 200 ft.

MEDINA COUNTY—C. J. Webster O&G Co.'s (National) Adams 1, Hillemeyer sur No. 25, near Devine, top Austin chalk, 2526 ft.

NUECES COUNTY—Gulf Coast Oil Co.'s Sedwick 2, Saxet field, sand 4550-56 ft, d. s. t. 8 fourbles oil and 7 fourbles mud, set cas. Houston Oil Co.'s McGregor 1, dr 2700 ft. Saxet Oil Co.'s Dunn 6, coring 5082 ft.

REFUGIO COUNTY—Blanco Creek Oil Corp.'s Dammann 1, Blk 18, Bonnie View Ranch Sub, 8 mi s and e Refugio field, sd 4685 ft. G. C. Dixon's P. M. Peck 1, Sec 24, Bonnie View Ranch, set 100 ft 12½ inch cas, now sd. Humble O&R Co.'s M. V. O'Connor


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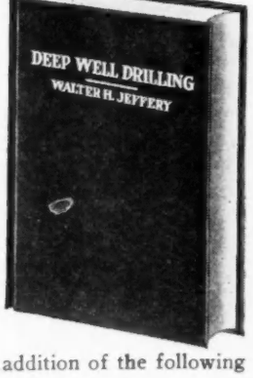


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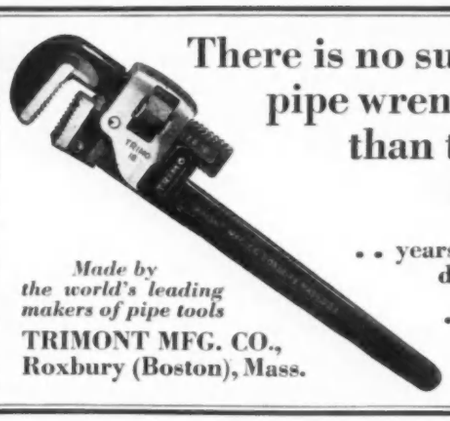

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SAN PATRICIO COUNTY—Atlantic Oil Co. & Welder Oil Co.'s Welder 3, 900 ft n No. 2, old gasser 3659-61 ft, to deepen. John F. Camp's Jackson 1, sw cor of southwest ¼ sec 30, 3 mi n of Edroy, mov on, rig up.

STARR COUNTY—Davis et al's Kelsey-Bass 1, sur 6, Olmos Pool, td 484 ft, completed 15 bbls. R. E. Johnston's Goodrich 1, tract 5,Porcion 81, sd 831 ft. Stryalls Oil Corp.'s M. E. Salinas 1, share 38-C, Porcion 80, dr water well. R. B. Suttles' Guerra 1, Porcion 110, dr 810 ft. Jess Williams' Welsh 1, Pedernal Grant, sd 425 ft.

TRAVIS COUNTY—Fritz Fuchs' W. M. Scheiffer 1, A. C. Caldwell sur, sd 520 ft; A. F. Smith 1, Kimbor sur, lcn. (Dropped). C. R. Franklin's J. Wilson 1, A. Alexander sur, sd 1195 ft. Henze & Ray's J. M. Hatch 1, center Hamilton sur, sd 565 ft. Bass & Fuchi's R. A. Chadwich 1, A. C. Caldwell sur, dk .

VICTORIA COUNTY—C. B. Bunte & C. R. & M. Dr. Co.'s Keeran 2, w of No. 1, lcn. Houston Oil Co.'s Konrad 1, T&NO sur, Beck Salt Dome, n Victoria, td 5310 ft, plug back to about 4850 ft, abn. Magnolia Pet. Co.'s Beck 1, ne Victoria, to make lcn. T. B. Slick Estate's McFadden 2, 3500 ft nw 1, J. Barian sur, dk. The Texas Co.'s McFadden 4, 2800 ft n No. 3, lcn.

WEBB COUNTY—French Oil Corp.'s Benavides 5-A, sur 659, ds 400 ft. O. W. Killam's Bruni 1, sur 445, abn 3407 ft; Bruni (Ranchito) 4, J. V. Borrego Grant, ru. Magnolia Pet. Co.'s Benavides 6, sur 660, Cole-Bruni field, sand 2336-45 ft, completed 100 bbls. Power & Detterheim's Cowan & Goss 1, sur 1606, sd 300 ft. Rosenberg, Johnson & Peacock's Laurel 1, Blk 10, sur 27, Carolina Texas pool, dr 2320 ft. W. R. Shankle & Ellison Fur & Carpet Co.'s 1, Blk 2, sur 466, lcn.

WILLIAMSON COUNTY—Burns et al's Wilder 1, R. Owens sur, sd 1496 ft. Hayes and Gee's E. G. Johnson 1, B. C. Low sur, s Georgetown, sd 1595 ft. McLean et al's Miller 1, Manlove sur, abn 1830 ft; Miller 2, n No. 1, prep to spd. Peterman et al's Galler 1, one mi nw Thrall, dr 1320 ft in Georgetown. R. S. Wilson's J. S. Speckels 1, J. Jordan sur, 1 mi n Coupland, sd 875 ft.

WILSON COUNTY—August M. Blume's Nickelson 1, Diaz sur, 2½ mi s Floresville, sd 1600 ft.

ZAPATA COUNTY—Bob & Richey's (Duke) Martinez 28, blk 24, W. R. Duke sub, Charco-Redondo Grant, lcn; Martinez 29, Blk 24, lcn. Ballard & Mercer's Flores 1, Blk 27, Marks sub, Porcion 37, dr 1648 ft. Borgan & Belcher's M. Garza Estate 1, Blk 62, C. A. Douglas sub, Comitas Grant, dr 650 ft. F. M. Blair & Son's Montemayor 1, Blk 1, sur 63, Escobas Field, spud in. F. H. Etheridge's Winch & Henne 2, Martinez pool, sur 386, sd 1747 ft; Winch & Henne 3, Blk 10, sur 286, coring 1720 ft; Winch & Henne 4, blk 10, ru 286, lcn. O. W. Killam's Medina 4, share 34, Fansler Partition, Comitas Grant, Escobas field, spudded; Medina 5, share 34, Fansler Partition, Comitas Grant, Escobas field, lcn. S. R. C. Oil Co.'s Montemayor 6-D, blk 10, sur 64, s offset Daniels & Hill well, td about 1490 ft, re-cemented, woc; Montemayor 7-D, blk 8, sur 64, w offset Daniels & Hill well, set cas about 1480 ft, woc. D. M. Shafer's M. Garza Estate 1, C. A. Douglas sub, Zorro Ranch, Las Comitas grant, lcn. Trevino Oil Co.'s M. Garza Estate 1, blk 36, C. A. Douglas sub, ru. United North and South Dev. Co.'s Gutierrez 1, blk 325, E. M. Doty O.&G. sub of Charco Redondo Grant, abn 1947 ft. Winch and Billing's Jose Bustamente 9, share 35, Fansler Partition, Comitas Grant, Escobas field, dr 1000 ft; Jose Bustamente 10, share 35, Fansler Partition, Comitas Grant, Escobas field, lcn.

ZAVALLA COUNTY—Carpenter et al's Wolf 1, Amos, Beaty and Moulton Block A sur, gas blowout, show little oil at 767 ft, setting cas.

# New Equipment for the Field

## MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼

### 1. Spudder

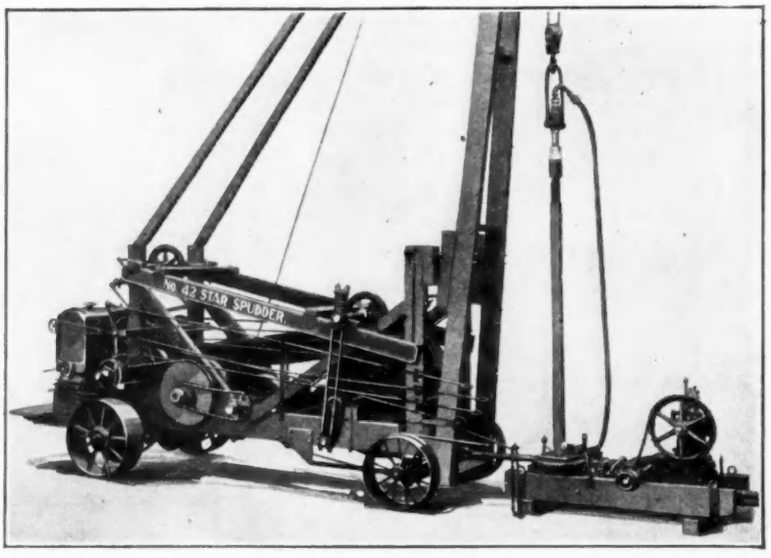
**STAR DRILLING MACHINE COMPANY**

Star Drilling Machine Company, Akron, has developed a line of rotary units of convenience and flexibility for use with cable tool machines.

The pump and table are built into a compact unit on skids easily moved and attached. It can be operated by chain or shaft drive, whichever is the most convenient.

Table sizes available are 10-inch, 13-inch and 15-inch. Mud pumps of proper size can be furnished with the unit or with separate drive if desired.

With these combination rotary units Star machines can be used for rotary or chilled shot work in addition to cable tool drilling. They provide an efficient drilling method for any formations encountered.

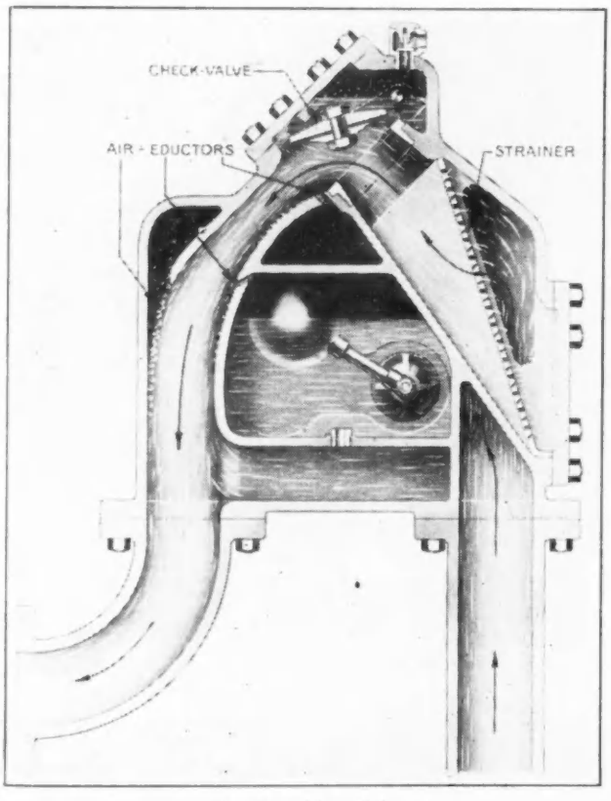



*Keystone Spudder*

### 2. Suction Line Primer

**BARRETT, HAENTJENS & COMPANY**

Barrett, Haentjens & Company, Hazelton, Pennsylvania, announce a new suction line primer which combines in one compact casting a check valve, strainer, and air removing device.




*Suction Line Primer*

The suction line primer is built in various sizes, for a maximum capacity of 1500 gallons per minute and a maximum operating head of 200 feet. When furnished with a special control panel, the primer makes possible automatic operation of the pump, with protection against loss of water, air leaks and break of the column line.

The primer can be applied to any moderate sized, suction-lift centrifugal pump without reducing the efficiency of the pump, according to the manufacturers, as the loss caused by friction through the primer is only slightly greater than the loss through a standard strainer and check valve.

### 3. Welding Heads

**THE LINDE AIR PRODUCTS CO.**

The Linde Air Products Company, 30 East 42nd Street, New York, New York, has developed a series of welding heads for use with the Oxweld Type W-17 welding blowpipe. These will supplement the one-piece style heads for this

— — — — — — — ***MAIL COUPON*** — — — — — — —

THE OIL WEEKLY,
Houston, Texas, U. S. A.

Please see that I am supplied, without obligation, additional information on New Equipment Items Nos._____ described in the February 19, 1932, issue of THE OIL WEEKLY.

*Name* .....

*Company* .....

*Address* .....

blowpipe, so that the user will have a choice of two types of welding heads.

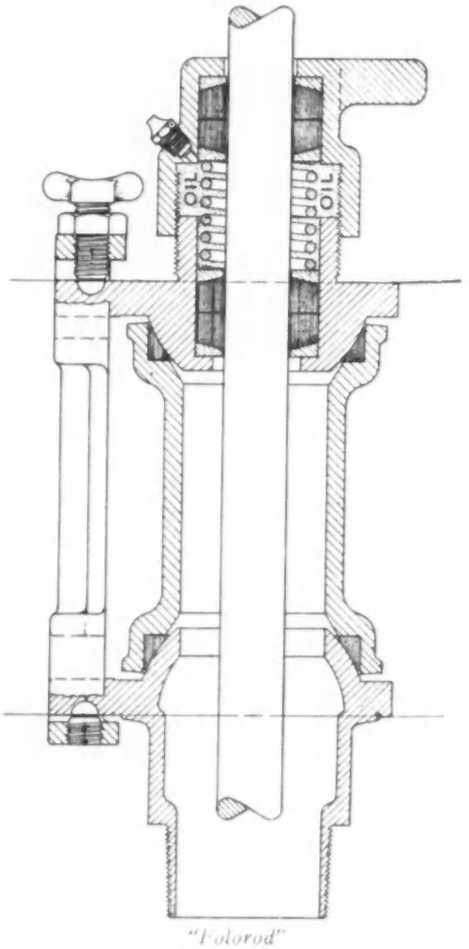
The new detachable tip heads were developed particularly for pipe line welding and for production operations. The new tip produces the same type of flame as that produced by the one-piece welding head for the Type W-17 blowpipe. Sizes Nos. 6 to 13, inclusive, are available in the new welding heads.

One of the practical features of the new design is the very satisfactory connection between the tip and the stem provided by the male thread on the tip which screws into the stem. Removal or replacement of the welding tip is thus facilitated.

## 4. "Folorod"

**HILL AND FOSTER COMPANY**

Hill and Foster Company, Wichita Falls, Texas, has announced a device called "Folorod" to alleviate the lateral stresses on stuffing box tubing.




*"Folorod"*

The device allows the stuffing box to follow the various movements of the polished rod without appreciable stress on the packing, and the design is such that there is no greater stress on the polished rod when it is near the wall of the tubing than when it is in the center, the manufacturers claim.

The design indicates that the lateral travel of the polished rod is limited to the difference between the diameter of the polished rod and the inside diameter of the tubing.

A bath of oil for the rod to travel in is furnished by the stuffing box.

## 5. Coated Electrode

**PAGE STEEL AND WIRE COMPANY**

Page Steel and Wire Company, Monessen, Pennsylvania, has developed a new type of coated electrode which it claims gives quiet operation with little sputter, both tending to allow economical operation because of greater deposition of metal per pound of electrode.

The manufacturers state that the new electrode results in extra deep penetration and that the strength of the weld with it is equal to that of the base metal with a total elongation of 30 per cent when pulled to destruction.

## Catalogs ◆ Bulletins

**Valves**

**Homestead Valve Manufacturing Company,** Coraopolis, Pennsylvania, recently published Reference Book No. 36, superseding all previous issues. In the book are described the Homestead quarter turn principle, brass straightway valves, semi-steel straightway valves, semi-steel lubricated valves, straight round port valves of semi-steel and of bronze, lift type valves, angle valves, blowoff valves, three-way valves, four-way valves, hydraulic operating valves, hydraulic spray valves.

**Weld Fittings**

**Taylor Forge and Pipe Works,** P. O. Box 485, Chicago, Illinois, has released Bulletin 32-1 tabulating latest dimensional and list price data on flanges and seamless steel fittings for welding.

**Motors**

**Wagner Electric Corporation,** 6400 Plymouth Avenue, St. Louis, Missouri, has issued Bulletin 167, Part 7, a loose-leaf bulletin page on polyphase squirrel-cage motors.

**Pipe Coating**

**General Paint Corporation** through its Hill Hubble and Company, division have recently issued a revised brochure on pipe protection. This booklet is complete as to descriptive data on the mechanical application of coating and wrapping pipe at the mill and also carries specifications and revised price schedules.

— — — — — — ***MAIL COUPON*** — — — — — —

THE OIL WEEKLY,
Houston, Texas, U. S. A.

Please see that I am supplied, without obligation, additional information on New Equipment Items Nos._____
THE OIL WEEKLY, February 19, 1932.

*Name*.....

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# NEWS *from the* *Industry's* EQUIPMENT MAKERS

***Keeping in touch with developments with Manufacturers and Supply Dealers***

**Caterpillar Tractor Company,** Peoria, Illinois, has discovered that conducting dealer schools throughout the United States is having a stabilizing influence in holding old business and developing new business. The company has 150 dealer schools scheduled between November 9, 1931, and March 15, 1932.

**Goulds Pumps, Incorporated,** Seneca Falls, New York, conducted a three-day training school for 38 salesmen of Eastern wholesale distributors in February. Such subjects as working principles, construction features, applications to various jobs, installation troubles and their remedies, and selection of materials for pumps were studied.

Irwin Burns, assistant to L. F. Baash, president and general manager of Baash Ross Tool Company, Los Angeles, has been given the added duties of sales manager of the company, succeeding H. H. (Dick) Clark, who resigned to become connected with the California office of the Frick-Reid Supply Corporation. The change was effective February 1.

**The Lincoln Electric Company** announces that B. F. McIntyre is now in charge of motor sales for the Chicago district. Mr. McIntyre was formerly with the Industrial Controller Company of Milwaukee. His electrical engineering education was obtained in Toronto, Canada.

Fred Archer, formerly president of Fred Archer, Inc., has been appointed to the Philadelphia office of the Lincoln Electric Company. He is in charge of motor sales for this office. Mr. Archer was with the White Motor Company and the Kelly-Springfield Tire Company before forming his own concern.

**Frick-Reid Supply Corporation,** Pittsburgh, Pennsylvania, has been appointed jobber to handle Gears and Forgings, Incorporated's, line of speed reducers, according to R. B. Tripp, general sales manager of the latter organization.

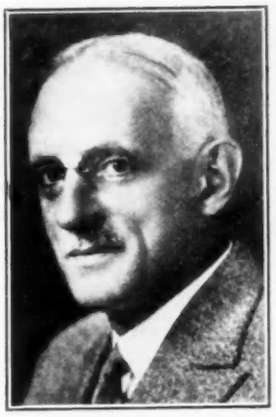
**Keystone Driller Company,** Beaver Falls, Pennsylvania, in a special meeting of the board of directors held February 10, elected the following officers: president, L. M. Johnston of Pittsburgh, formerly vice president of A. M. Byers Company; vice president, E. C. Rebeske, president of First National Bank of Beaver Falls and formerly treasurer of Union Drawn Steel Company, secretary, R. R. Downie; treasurer, C. T. Smith.

**Wheeling Steel Corporation,** Wheeling, West Virginia, announces the return of H. W. Bishop, Jr., to the organization to direct sales and production of tubular goods to the oil industry. For the past ten years Mr. Bishop has been with Harrisburg Pipe & Pipe Bending Company.

**M. L. Rosenblum,** formerly of Pittsburgh, Pennsylvania, has opened an office in the Merchants and Manufacturers building, Houston, where he will broker a number of steel products to the producing and refining branches of the oil industry.

**Worthington Pump & Machinery Corporation,** New York, announces the following personnel changes, effective February 1:

C. E. Wilson, for past nine years general sales manager has been appointed vice president in charge of industrial relations. Mr. Wilson began his career with Worthington in 1899 as



C. E. Wilson

a salesman in the Chicago office. In 1905, he was appointed sales manager of that office and later was made assistant general sales manager in charge of all territory from Cleveland to Denver. In 1918, he became assistant general sales manager in charge of foreign business, where he remained until 1923, when he was made general sales manager.

Clarance E. Searle, for past 17 years, general representative in charge of sales for Allis-Chalmers Manufacturing

**WORLD'S LONGEST PIECE OF PIPE**

*The ability of Republic Steel Corporation's Electric Weld Mills to produce pipe of almost any conceivable length is indicated in the accompanying picture. This length of eight-inch pipe measures 285 feet, said to be the longest single piece of pipe ever made without circumferential welds. The pipe was made from a single continuous length of plate. Republic Electric Weld Pipe is formed cold from the flat plate, the weld being made by the resistance method without the addition of foreign metal, and having the same strength as the body of the pipe. The result is a product free from the scale, with exceptionally uniform wall thickness and perfect concentricity.*

Company, has been appointed vice president in charge of sales. Mr. Searle became associated with the Allis-Chalmers organization in 1908, prior to which time he was with the Western Electric Company and the Fort Wayne Electric Works (a division of General Electric Company). After one year as a sales representative in the Milwaukee office of Allis-Chalmers, he became district manager of that office in 1910. He filled that position until 1915, at which time he was made general representative in charge of sales—a position he held until his present appointment.

William H. Baumes, for past 14 years, treasurer, retired at the age of 61. Mr. Baumes had a long and distinguished career. After completing his education, he was employed in the accounting department of several rail and steamship companies. In 1898, he joined the staff of Patterson, Teele and Dennis, public accountants of New York. From 1901 to 1910, he was first auditor and then comptroller of a group of corporations owning and operating extensive lumber, coal, railroad and allied properties in New York, Pennsylvania, Louisiana and Mississippi. From 1910 to 1915, Mr. Baumes practiced as a public accountant in New York. In 1915, Mr. Baumes was appointed comptroller of Worthington Corporation, and 1918, he became treasurer, the post he held until his resignation.

Charles N. Barney, for past 14 years secretary and general counsel, has been appointed secretary, treasurer and general counsel. After graduation from Tufts College and Boston University Law School, Mr. Barney was admitted to the Massachusetts Bar in 1898, and practiced before the state and federal courts for 20 years. In 1918, he was appointed secretary and general counsel of Worthington, where he now takes over the added duties of treasurer.

A. L. Prentice, formerly assistant comptroller, has been appointed assistant treasurer. Mr. Prentice joined the

CLARENCE E. SEARLE

Worthington organization in 1911, prior to which he had spent 10 years in various phases of banking. He has had close contact with Worthington's associated interests in Europe and is intimately acquainted with financial conditions abroad.

Frank D. Talmage, formerly member of counsellor's staff, has been appointed assistant secretary. Mr. Talmage, a graduate of Princeton University and the Harvard Law School, was admitted to the New York Bar in 1928. Formerly associated with Hunt, Hill and Betts of New York City, Mr. Talmage joined the general counseller's staff of the Worthington Corporation in 1929.

---

E. F. NEWMAN, sales representative of Fairchild Aerial Surveys, Incorporated, at New Orleans, was in Houston last week.

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We have doubled the capacity of our plant to take care of the increasing demand for DIAMOND METAL. This has been done by cutting drilling costs—not on freak performances. The increasing demand for DIAMOND METAL proves its superiority.

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### Give Technical Exhibits Prominence At Oil Show

Especial attention is being given to the technical exhibits which will be displayed at the Third Annual Oil Equipment & Engineering Exposition that will be held at the exposition grounds located on Alameda Boulevard at 131st Street, Los Angeles, March 21-27, 1932. These exhibits, together with the meetings of the various engineering societies connected with the oil industry, will provide visitors with valuable data and will be educational as well as interesting. Present indications are that all the latest developments in tools and machinery will be on display; and these will greatly aid oil men in solving the problems with which they are confronted, and will assist them in making greater economies in operation.

Advice has been received from N. V. Vannikoff, representative of the All-Union Oil and Gas Industries of the U. S. S. R. that a very interesting exhibit will be given by the Soviet government. In this exhibit will be displayed a globe and six shields with diagrams and photographs, illustrating the development of the Russian petroleum industry; petroleum exports from the U. S. S. R., imports of equipment, particularly from the United States; the application of American petroleum equipment; and Russian inventions in the petroleum industry.

Among these inventions will be shown Mr. Kapeliushnikoff's turbine drill. This equipment will be set up and operated to demonstrate the operation of the drill. Mr. Vannikoff, whose headquarters are with the Amtorg Trading Corporation in New York, will be in attendance during the exposition.

The National Safety Council will have a booth and an important exhibit. It will be under the direction of George Prussing, safety engineer for Union Oil Company.

Details for other technical exhibits are being worked out and each specific branch of the industry will be treated. One such display, for instance, will treat solely of Diesel engine construction, operation and maintenance.

Two types of derrick construction will be clearly shown by the two derricks already erected on the exposition grounds. The heavier derrick equipment will be displayed both on these derrick floors and in the main building. Other large machinery will be shown on the outside space, while every type of tool and special equipment will be exhibited inside.

A marketing division has been inaugurated for the Third Annual Exposition, and refined products, together with equipment for their distribution, will be shown in a special section set off for that purpose.

Admission will be by ticket only. Complimentary tickets are being supplied by the management to everyone connected with the oil industry so all who are interested may visit the show as often as desired. In this way, it is assured that all can make a thorough inspection and can make such inspection at their convenience.

# Squeaks from the Bull Wheel

▼ ▼ ▼

"Could you help out with $10, old fellow?"

"Impossible. But thanks for thinking I could."

---

"Tilly, you were entertaining a man in the kitchen last night, were you not?"

"That's for him to say, ma'am. I did my best."

---

Tourist—Can you cash this check for me?

Small Town Banker—No, we don't carry that much money at the counter, but I'll take you over to the filling station and introduce you.

---

"I want to see the boss."

"What do you want to see him about?"

"About a job."

"I'm sorry, but you can't see him; he's in an unemployment conference."—*Judge.*

---

Indignant wife (to home coming husband)—What does the clock say?

Husband—It shays "tick-tock," and doggies shay "bow-wow," and cowe "moo-moo," and little pussy cats shay "meow-meow." Now, are you satisfied?

---

An angry woman rushed into the registrar's office. In her hand she bore a license. To the registrar she said: "Did you, or did you not, issue this license for marryin' me to Albert Briggs?"

"Yes, I believe I did. Why?"

"Well, what are you going to do about it?" she demanded; "he's escaped."

---

A sage says that "An elephant's trunk has 40,000 muscles in it, so it was undoubtedly packed by a woman."—*The Inland Oil Index.*

---

Jones: "Say, that's a wonderful follow-up system you have there for collections. Where did you come across it?"

Brown: "I just saved the letters my boy sent me while at college and adapted them to my business."

---

"I guess my father must have been a pretty bad boy," said one youngster.

"Why?" inquired the other.

"Because he knows exactly what questions to ask when he wants to know what I have been doing."

---

"Who really is the boss in your house?" inquired the friend.

"Well, of course, Maggie assumes command of the children, servants, dog, cat and the canary. But I can say pretty much what I please to the goldfish."

---

A man and his wife had the reputation of being the world's ideally married couple, so on their silver anniversary friends gathered, and in the course of the evening asked the wife how it happened that she and her husband never quarreled.

"It's because we understand each other so perfectly. If we have a difference of opinion and I am right, he gives in immediately."

"And if it is he who is right?"

The lady drew herself up. "In our 25 years of married life," she declared, "that has never happened."

---

She—Don't you know there are germs in kissing?

He—Say, girlie, when I kiss I kiss hard enough to kill the germs.

---

Lady: "I never heard such swearing since the day I was born."

Urchin: "Yes, I suppose there was a good deal the day you were born."

---

An Englishman, while attending a banquet in Canada, was very much impressed by the following toast: "Here's to the happiest moments of my life, when I was held in the arms of another man's wife—My Mother."

The Englishman upon returning to England, was elected toastmaster at a banquet and decided to give the clever toast he had heard in Canada. He arose and said: "'Ere's to the 'appiest moments of my life, when I was 'eld in the arms of another man's wife—er-er-ah, I forgot who the bally woman was."

---

"I've been watching that service man for the last 15 minutes. There's a man that knows his business. He didn't spill a drop of oil on the mudgard. He put down the hood gently, fastened it securely and left no fingerpints on it. He wiped his hands on clean waste before opening the door, spread a clean cloth over the upholstery, meshed the gears noiselessly and then drove slowly and with caution into the street."

"Yeah. That's his own car."

---

Lawyer—And where did you see him milking the cow?

Witness—Just a trifle beyond the center, sir.

---

The teacher was drilling her class in the principles of subtraction. "Now, if you subtract 25 from 37, what's the difference?"

"Yeah, that's what I say," answered one of her pupils. "I think it's the bunk, too."

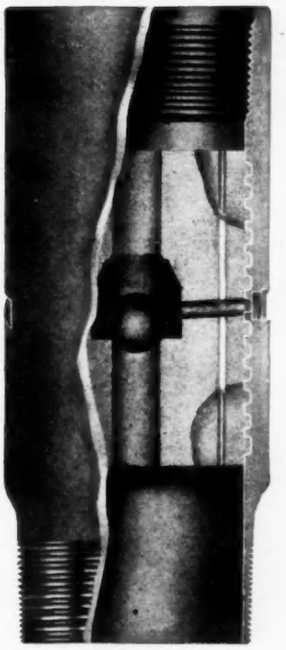

## At Last! Here's An Improved Method by Baker of Handling Combination Jobs

**From both an engineering and a mechanical standpoint, conditions are never as favorable for a Re-Cement Job as for Original Operations.**

**When it is a matter of cementing a Combination Job, or of cementing off at a specific point along the length of the string, this Baker Whirler Cementing Collar is, without question, the outstanding tool for the job.**

**Going into the hole, it acts as a Float Collar on the string. When circulation is started and the cement is put in, the Valve Ball closes the lower outlet and the cement goes out through the side ports, being given a whirling motion around the circumference of the Collar which assures even distribution and eliminates danger of channeling.**

**You should know about this new and better tool. Write, today, for descriptive portfolio.**



**BAKER OIL TOOLS, Inc.**

**Huntington Park, California**

COALINGA HOUSTON TULSA NEW YORK

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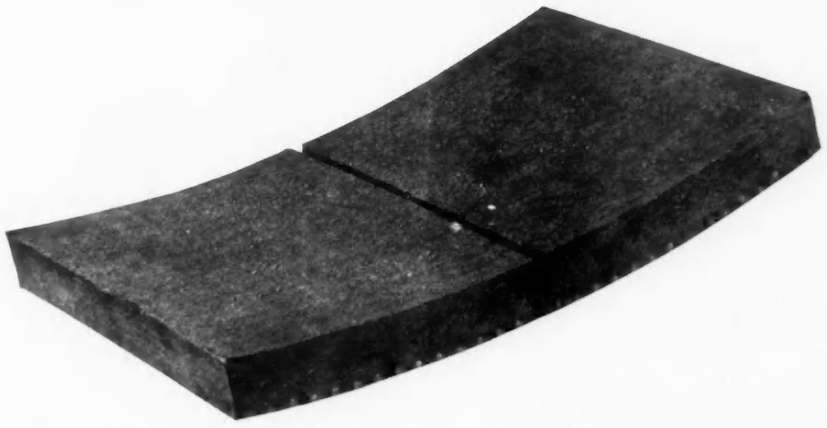

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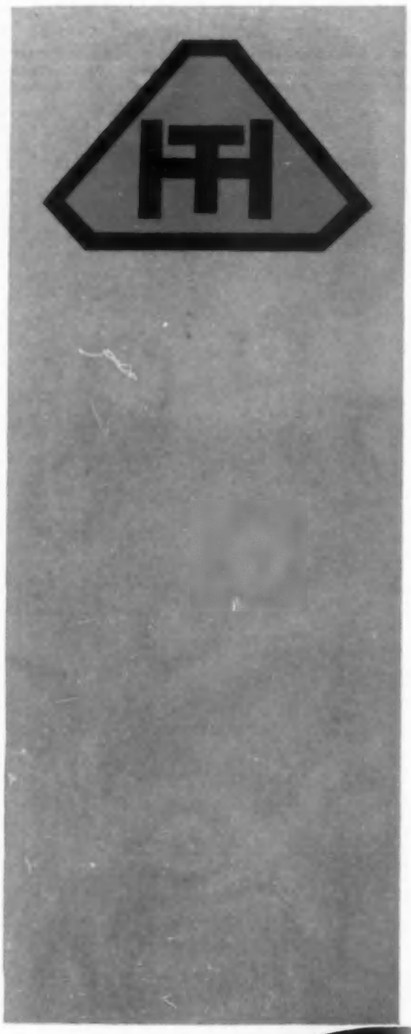
AMERICAN BRAKEBLOK TRADE-MARK

★



# *a Trade Mark* DOES *have value*

**The Trade Mark above at the left is found on every Hughes Tool. It is a symbol for superior performance.**

**Operators, contractors and drillers throughout the oil fields of the world have found Hughes Tools to be dependable, safe and economical in operation.**

## HUGHES TOOL JOINTS

***Uniformity of manufacture from highest quality material, plus scientific heat treatment and complete tests give to Hughes Tool Joints a maximum life of trouble free performance.***

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*Service Plants*
Los Angeles, Calif.
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*Main Office and Plant*
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Woolworth Bldg.,
New York City